

# IMPORTANT

## RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
**HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET. TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**  
Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
- DO NOT CUT AWAY ANY CHORDS OR WEBS.  
**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Test weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

# NOTES

- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAIN—ONE SHOP COAT
- PAIN—ONE SHOP COAT
- BRIDGING—
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'0" LENGTHS STANDARD 6" LAP.
- TYPICAL WELDS:

# FINAL PLANS FOR FIELD USE

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DATE	PRINTS	FOR LICHENWALD, JOHNSTON IRON WORKS CO.
NOV 13 1975	APP 1	AT MORTON CORRECTIONS
NOV 13 1975	APP 15	SHIP TO JOB SITE
MAY 1975	FIN 5	AT AUBURN, ILLINOIS
FEB 3 1975	FIN 5	JOB MIDDLE SCHOOL
		ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

# VULCRAFT STANDARD DETAILS

SECTION - 1

SECTION - 2

SECTION - 3

SECTION - 4

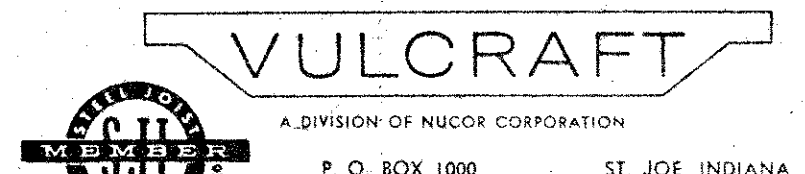
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SECTION - 6

SECTION - 7

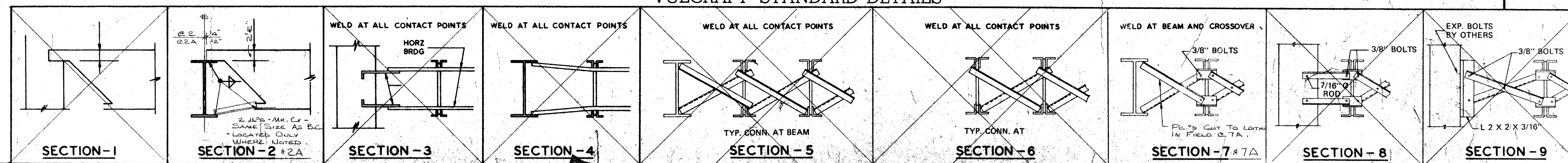
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SECTION - 9

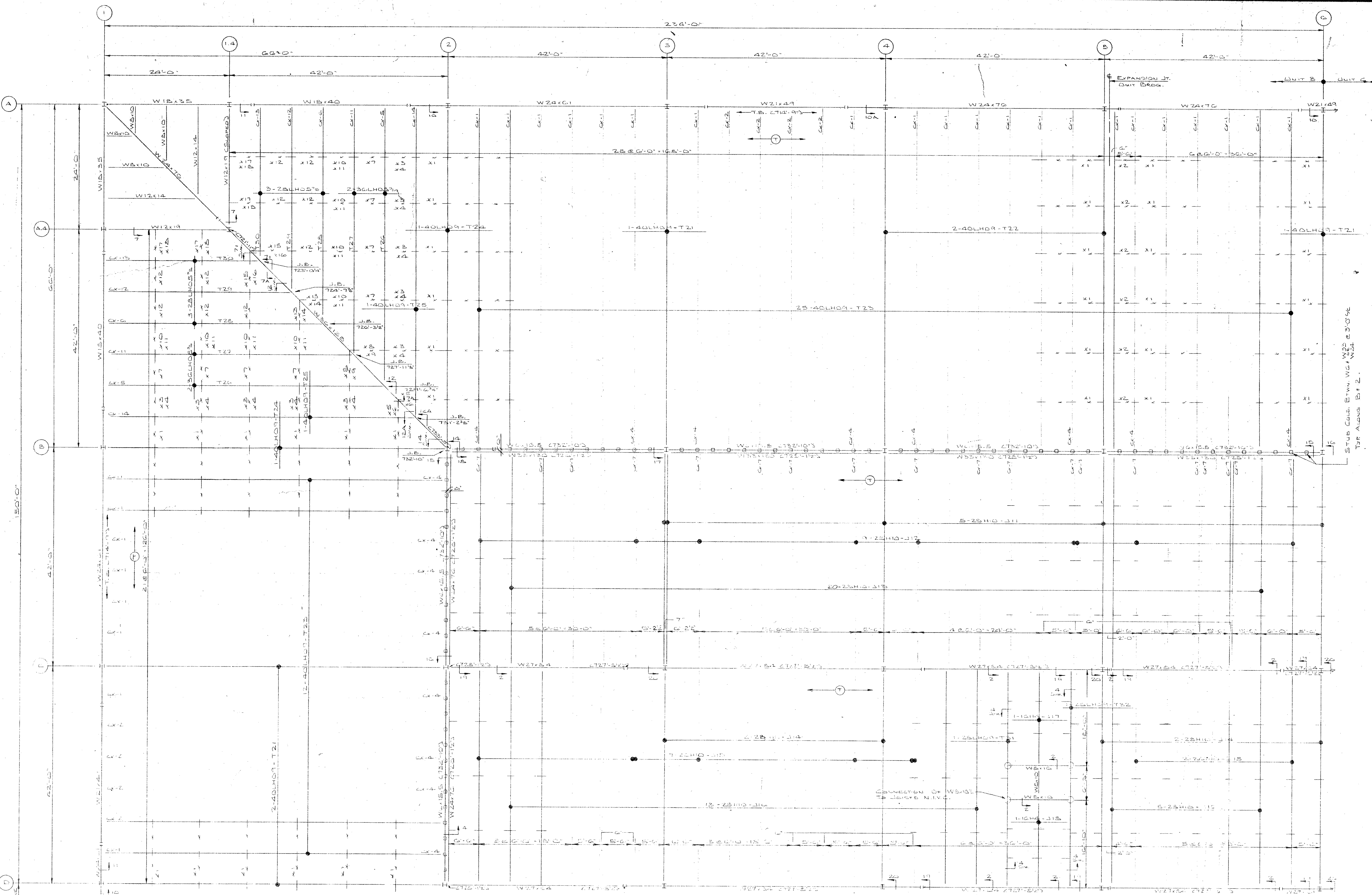


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# **IMPORTANT** RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS: ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.**
- (2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS. PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
**HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID-SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**  
Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- (5) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- (6) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- (7) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
- (8) **DO NOT CUT AWAY ANY CHORDS OR WEBS.**  
**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
- (9) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

## **NOTES**

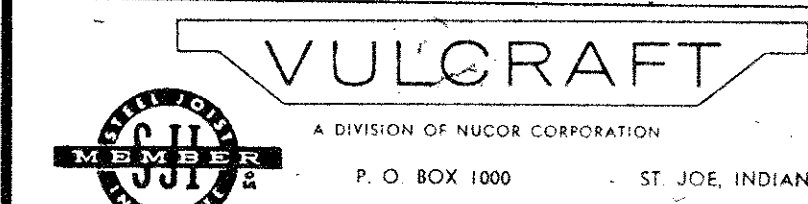
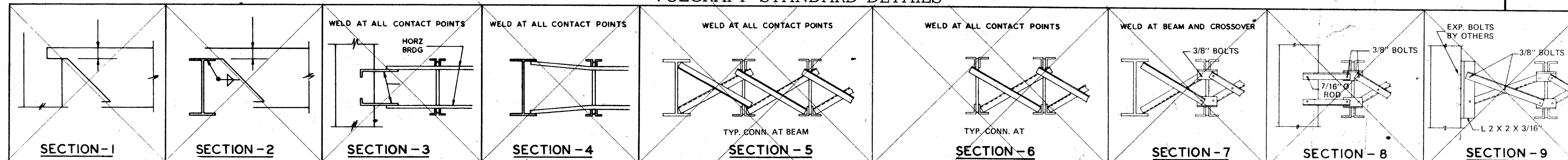
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4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT RED
6. PAINT—ONE SHOP COAT
7. BRIDGING—1 1/2" x 1 1/2" x 1/4" HORIZONTAL
8. BRIDGING—1 1/2" x 1 1/2" x 1/4" BOLTED DIAGONAL
9. PLACE TAGGED END OF JOIST WHERE INDICATED THIS
10. N.Y.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

**FINAL PLANS  
FOR FIELD USE**  
MAY 24 1976

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DATE	PRINTS	FOR LITCHENWALD, LITCHENWALD IRON WORKS CO.
11-1-76	1	AT MARTON, LOUISIANA
	2	SHIP TO JEE, INC.
	3	AT ALBANY, ALABAMA
	4	JOB ALBANY, ALABAMA
	5	ARCHITECT
	6	REPRESENTATIVE BUILDERS' STRUCTURAL STEEL CO.

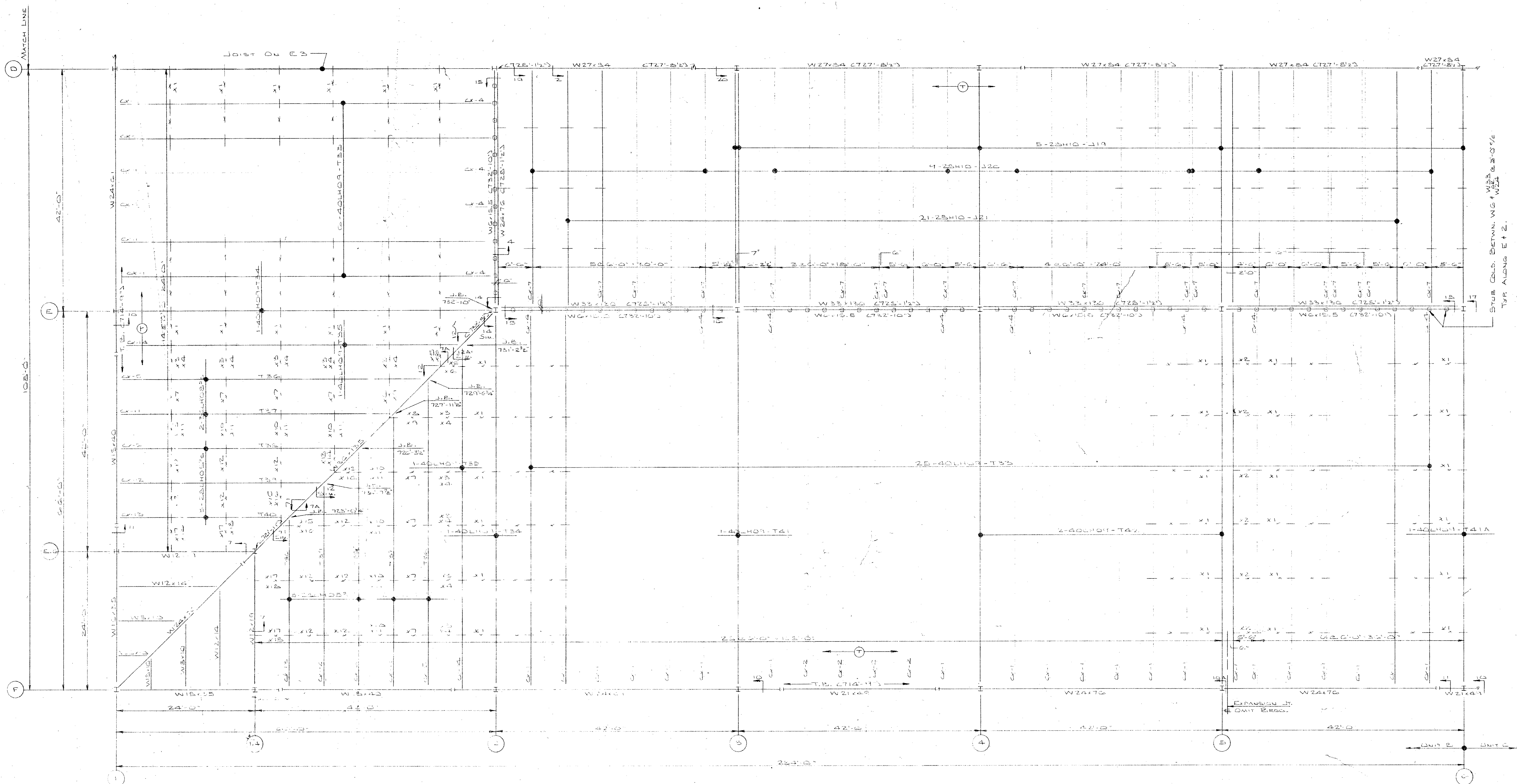
## **VULCRAFT STANDARD DETAILS**



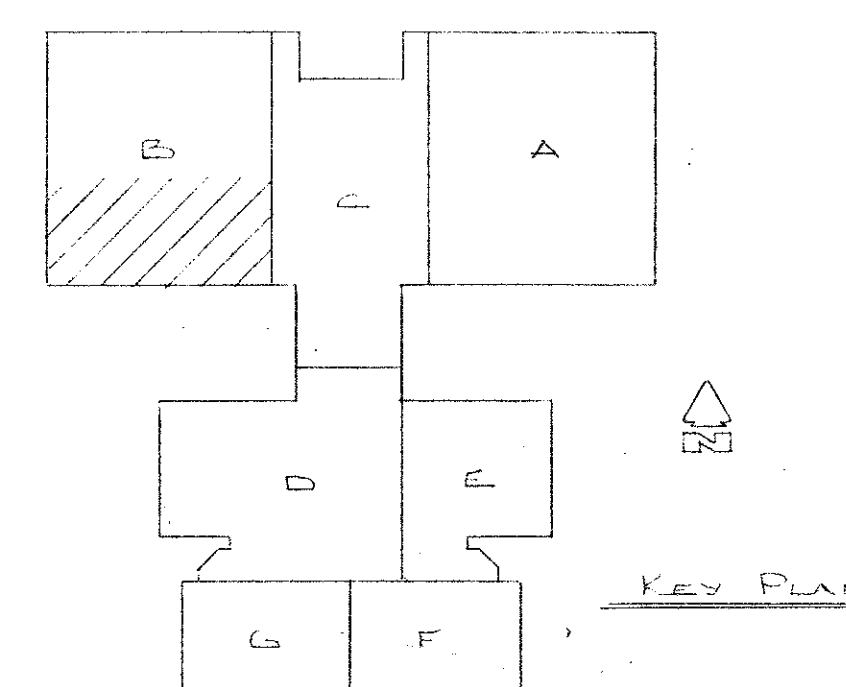
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REVISIONS	DATE	DATE	DATE
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FILE NO. DRAWING No. OF 11





PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT "B"  
SCALE 1/4" = 1'-0"




## IMPORTANT

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4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT RED
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7. BRIDGING—1 1/2" x 1 1/2" x 1/4" HORIZONTAL
8. BRIDGING—1 1/2" x 1 1/2" x 1/4" BOUTED DIAG.
9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
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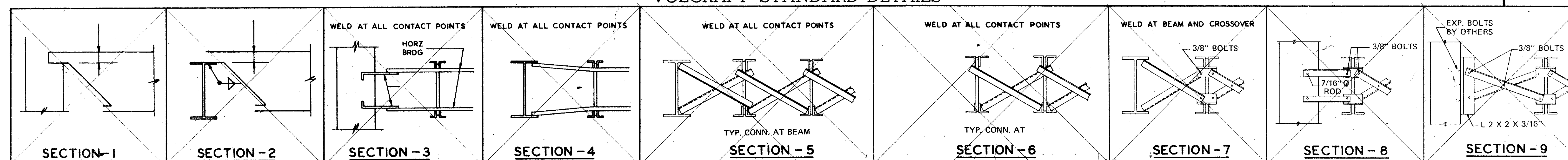
FINAL PLANS  
FOR FIELD USE

MAY 24 1976

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DATE	PRINTS	FOR LIGHTENWALD-JENNINGS TRUSS WORKS CO.
APR 15 1976	APP 1	AT MORTON GROVE, ILLINOIS
MAY 2 1976	APP 12	SHIP TO JOB SITE
	APP 13	AT ALPENA, ILLINOIS
	APP 14	JOB MIDDLE SCHOOL
	APP 15	ARCHITECT
	APP 16	REPRESENTATIVE ROBERTS STRUCTURAL STEEL CO.

## VULCRAFT STANDARD DETAILS



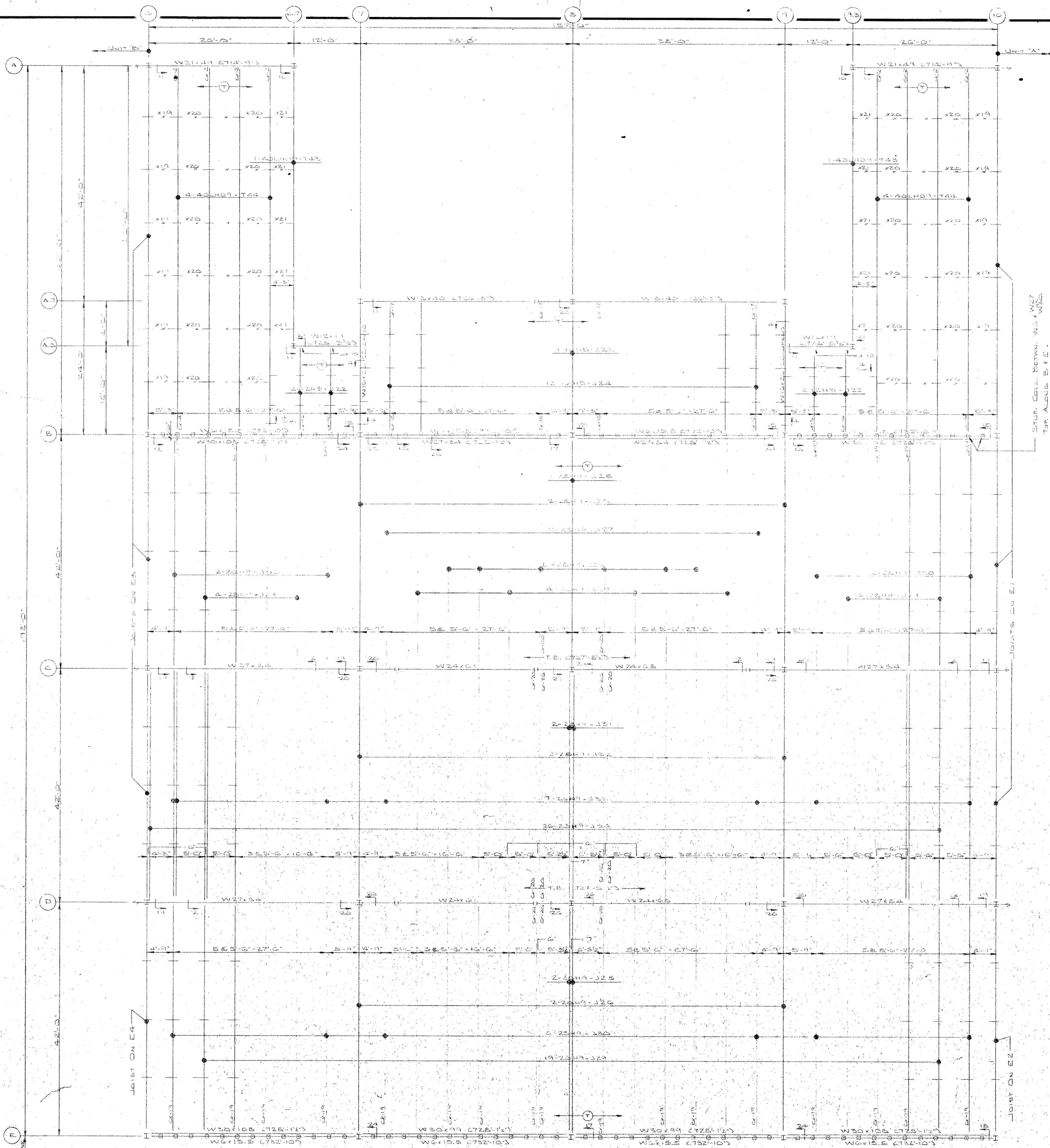
**VULCRAFT**  
A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

DRAWN BY 2577 DATE 10-15-75 CKD BY 2577 DATE 10-15-75

REVISIONS

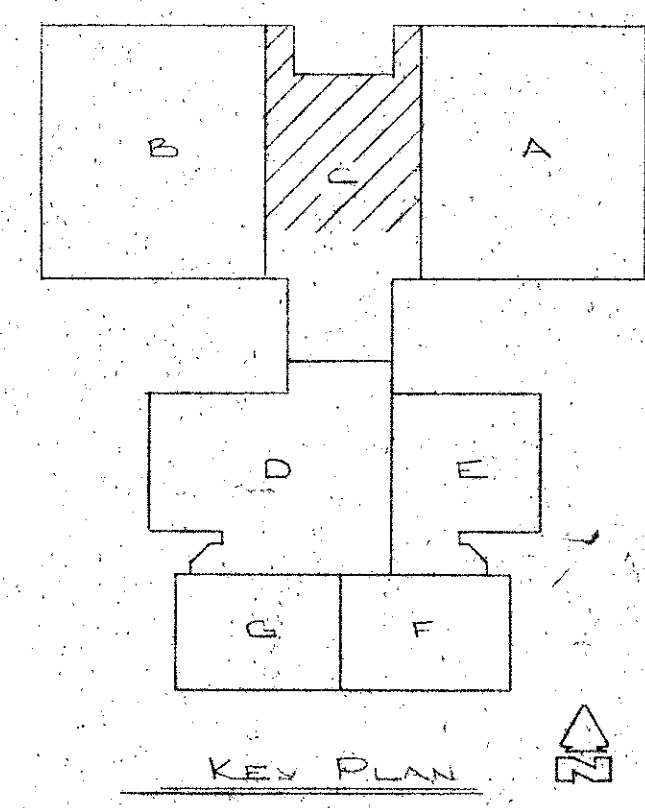
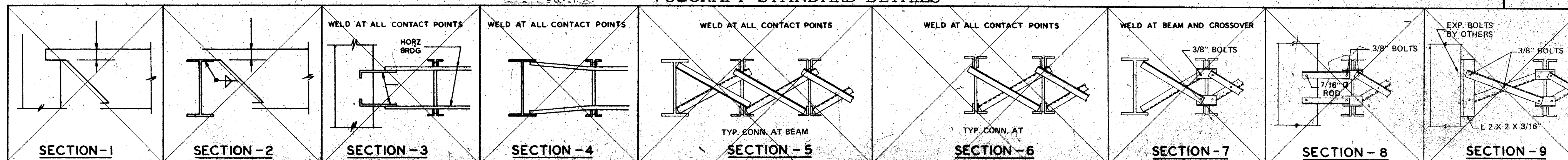
FILE No. 100-1000 DRAWING No. 100-1000 OF 11





PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT C

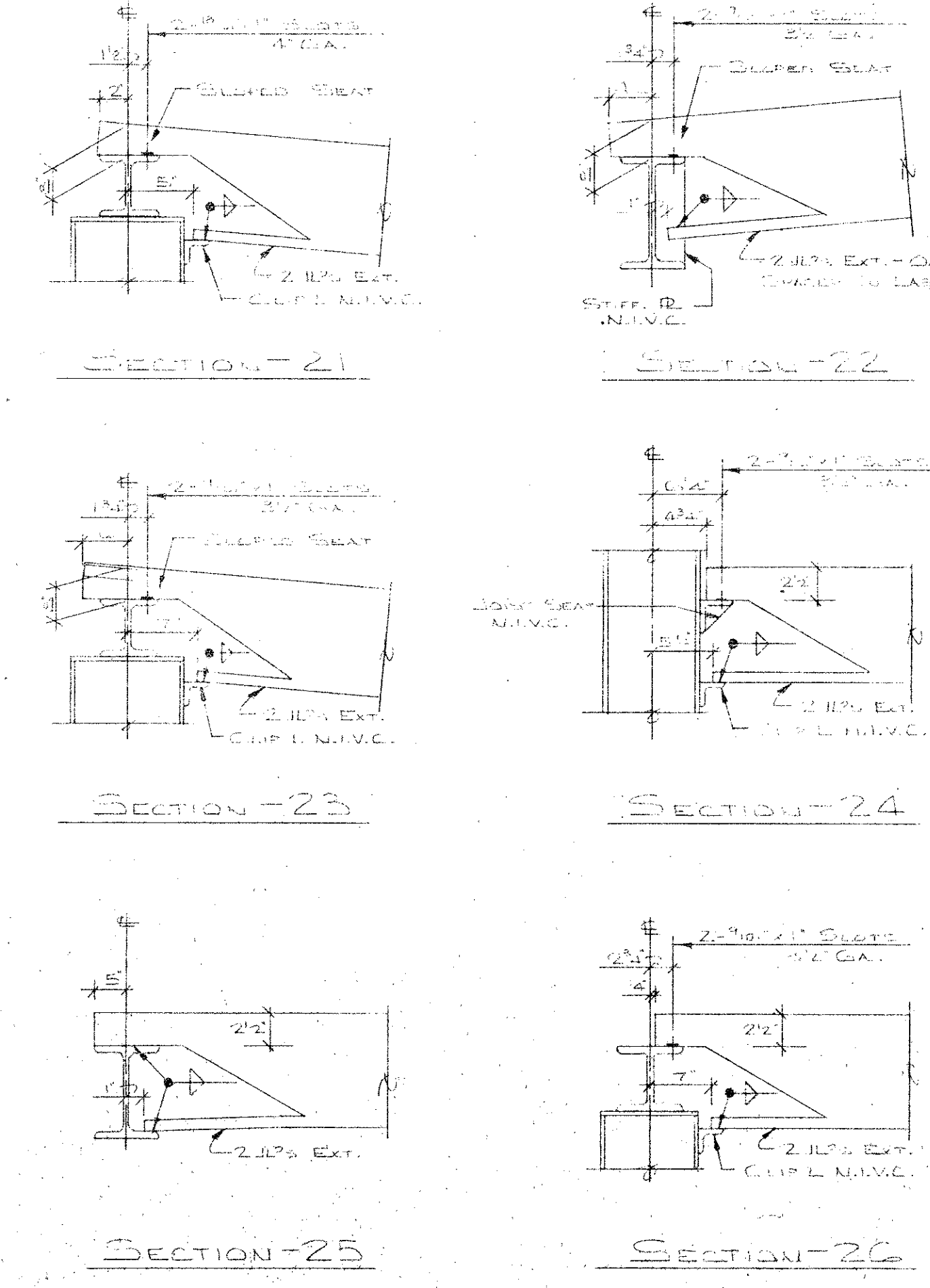
VULCRAFT STANDARD DETAILS



IMPORTANT

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- PAINT—ONE SHOP COAT
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- BRIDGING—1 1/2" x 1 1/2" x 1/4" BOTTOM DIAPHRAGM
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- N.L.V.C.—NOT IN VULCRAFT'S CONTRACT.
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FINAL PLANS  
FOR FIELD USE  
MAY 24 1976

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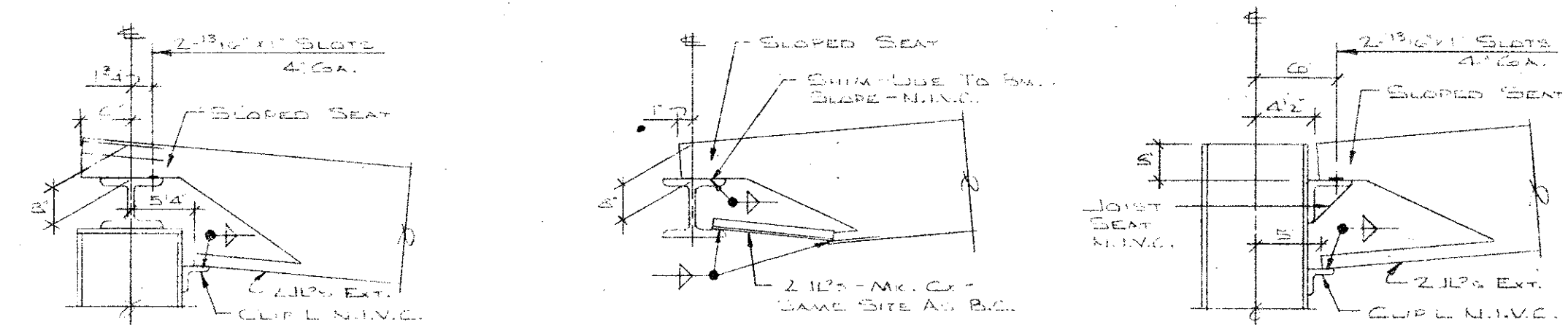
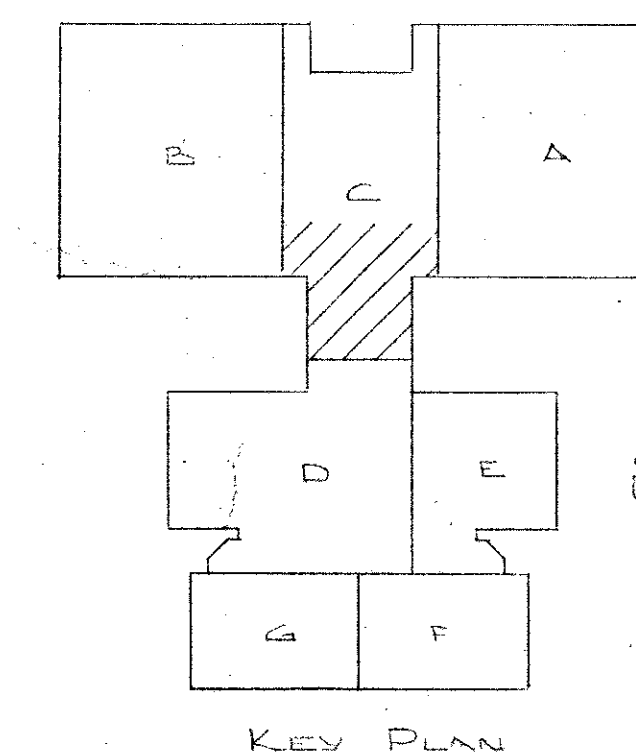
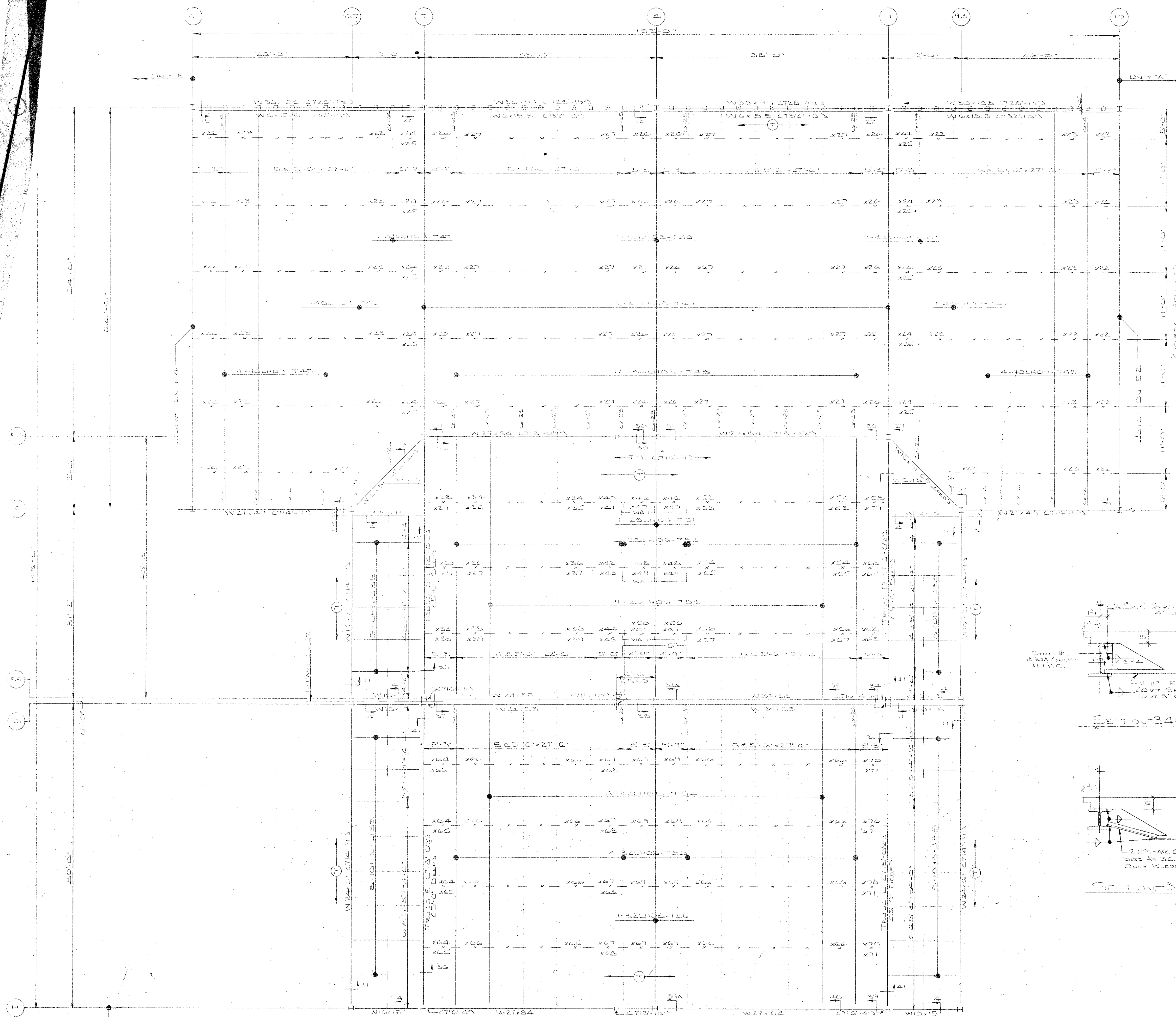
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OCT 20 1975	1	AT MORTON, ILLINOIS
NOV 13 1975	APP 10	SHIP TO JOB SITE
JAN 8 1976	APP 10	AT AURORA, ILLINOIS
FEB 3 1976	FIN 10	JOE MOORE SCHOOL
		ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

VULCRAFT  
A DIVISION OF NUCOR CORPORATION  
P.O. BOX 1000 ST. JOE, INDIANA 46785

			
DRAWN BY	DATE	CHK BY	DATE
AEV	10-6-75	OLD BY	10-6-75
REVISIONS			DATE
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FILE No. 02-5-1194 DRAWING No. E5 OF 1

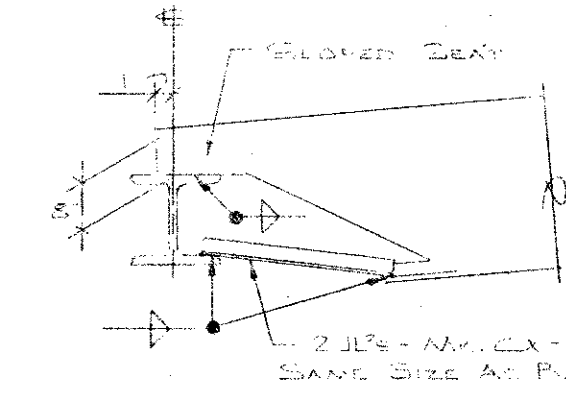




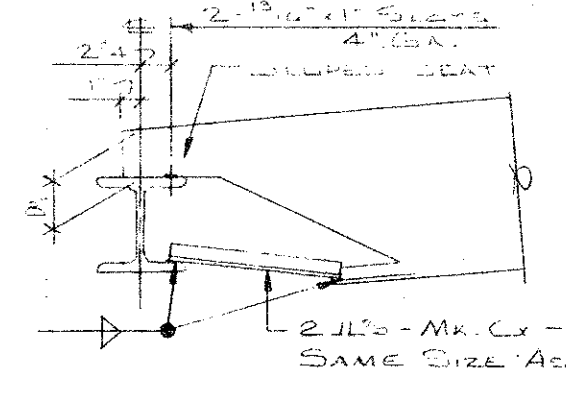
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SECTION-28

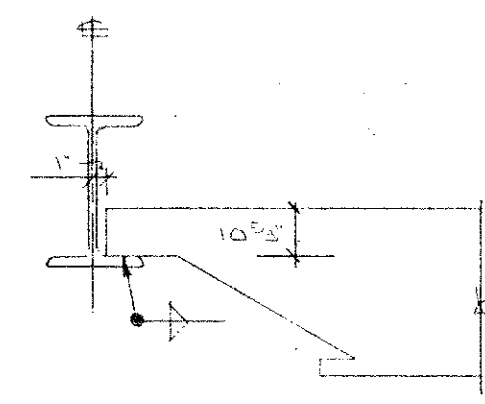
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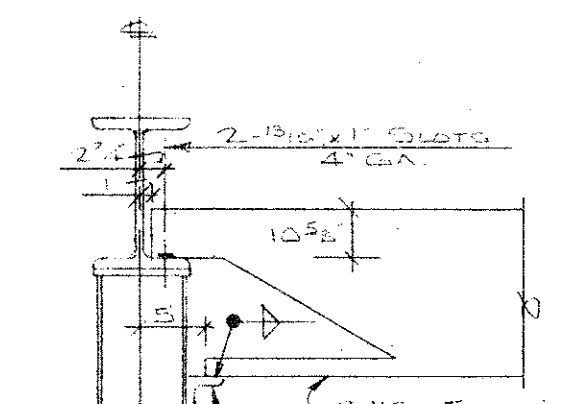
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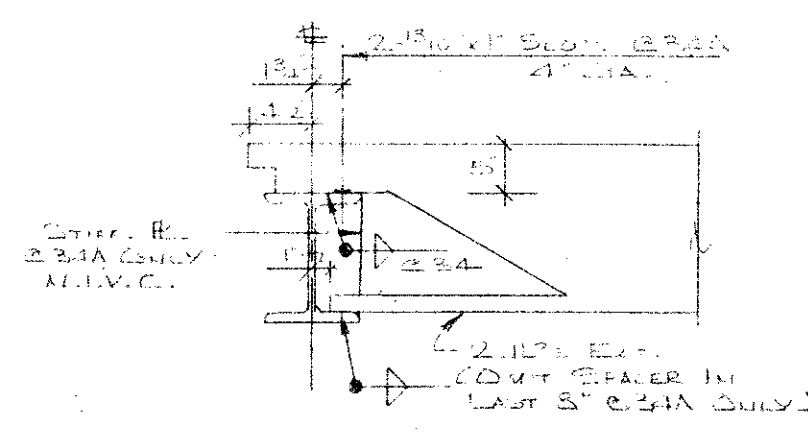
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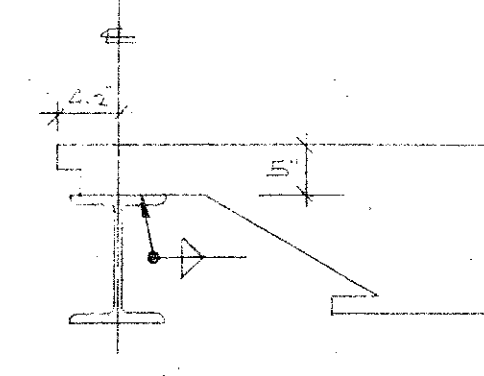
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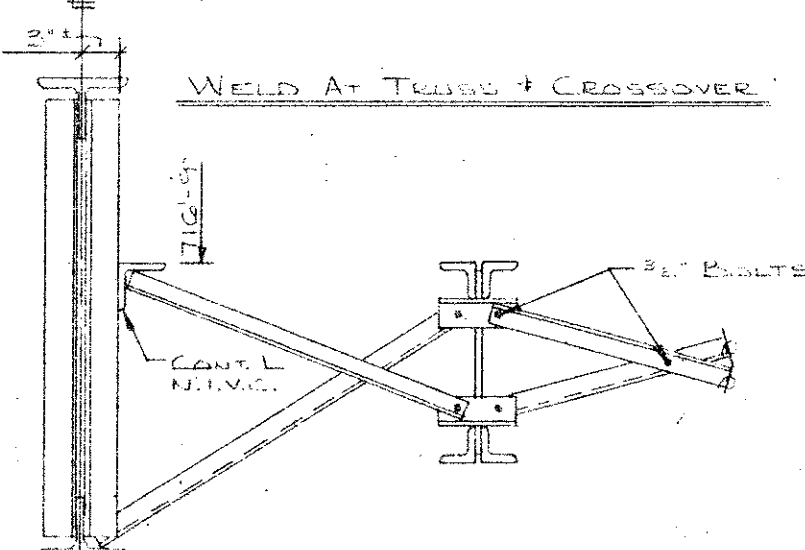
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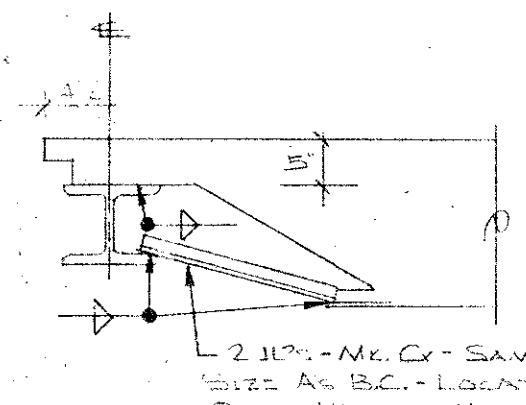
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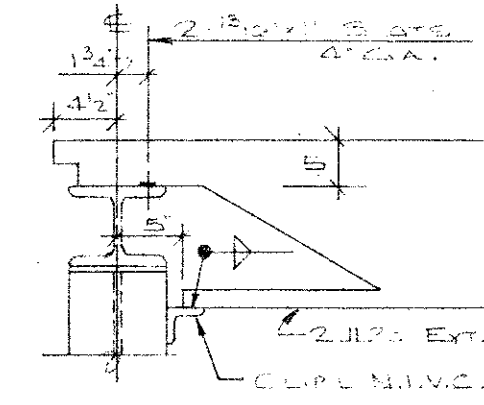
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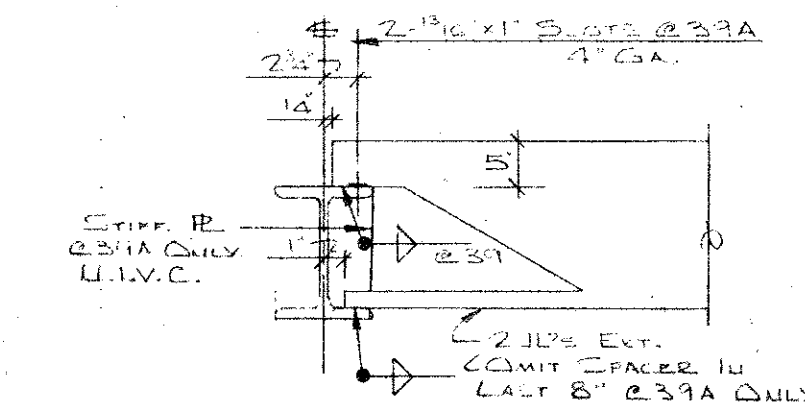
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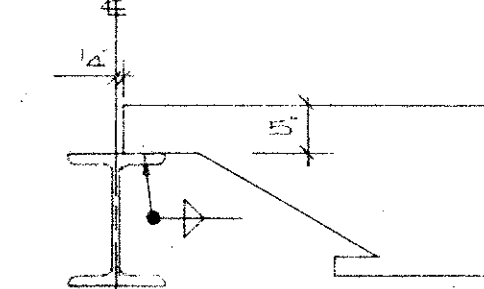
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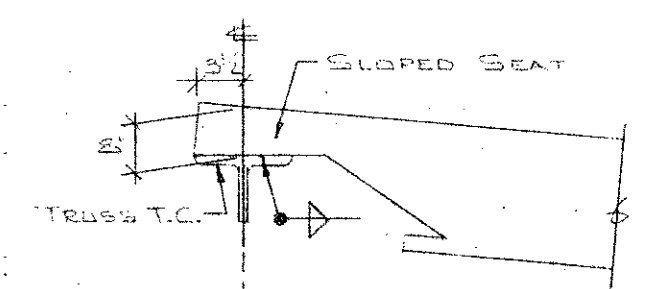
SECTION-38



SECTION-39+39A



SECTION-40



SECTION-41

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FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKET ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- Store joists on wooden slids and in a vertical position. Slids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET. TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
- Brace joists in and bays if needed to prevent lateral displacement during installation of bridging.
- Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
- When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to listed plans.
- VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- DO NOT CUT AWAY ANY CHORDS OR WEBS.
- DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Field weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joint bearing support.
- Do not attempt to align or straighten joists in group after installation of bridging and permanent attachment to bearing supports has been made.
- Do not dump or throw joists off of truck, as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

# NOTES

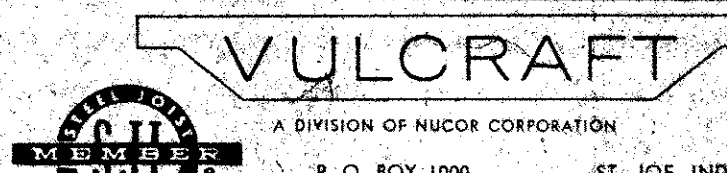
- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAIN—ONE SHOP COAT
- PAIN—ONE SHOP COAT
- BRIDGING—L 1/2" X 1/2" X 1/2" HORIZONTAL
- BRIDGING—L 1/2" X 1/2" X 1/2" BOLTED DIAPHRAGM
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS 1
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

## FINAL PLANS FOR FIELD USE

MAY 24 1976

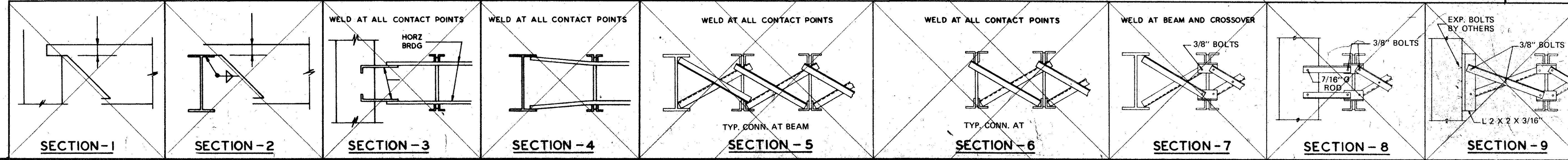
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DATE	PRINTS	FOR
APR 1 1975	22	FOR LICHTENWALD JOHNSON IRONWORKS CO.
APR 1 1975	22	AT MERTON GROVE, ILLINOIS
APR 1 1975	22	SHIP TO JOB SITE
APR 1 1975	22	AT AURORA, ILLINOIS
APR 1 1975	22	JOB MIDDLE SCHOOL
APR 1 1975	22	ARCHITECT
APR 1 1975	22	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.



DRAWN BY	ARM	DATE	10-9	CHKD BY	EDP	DATE	10-16-75
NO.	20	REVISIONS		DATE			
FILE NO.	02-5-1194	DRAWING No.	EG	OF			

## VULCRAFT STANDARD DETAILS





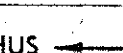


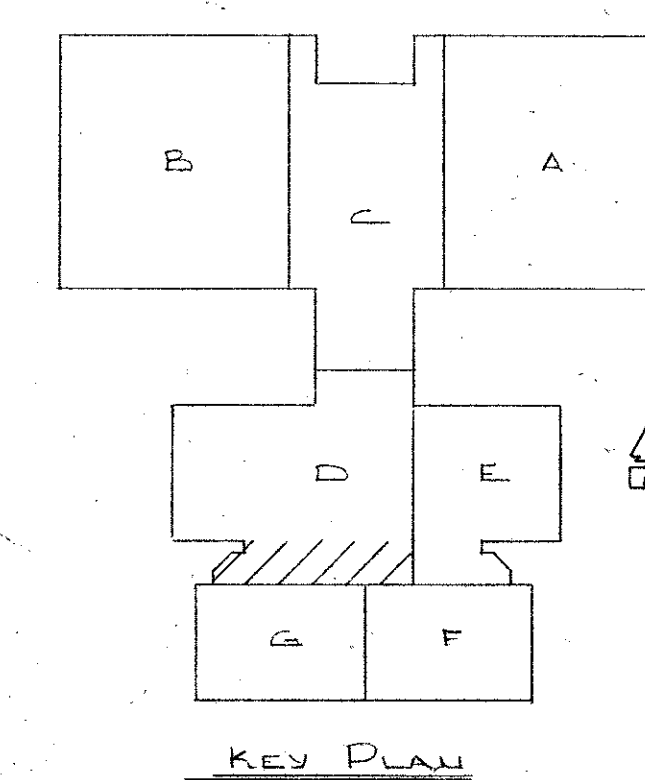




- (1) Check quantity and condition of joints and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.**
- (2) **When UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO THE BOTTOM CATCHER OF THE JOINTS. NEVER TO THE TOP OF THE JOINTS. MEMBERS.** Use blocking if needed to prevent damage to beams or joists.
- (3) Store joints on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joints should be stacked on heavy beams so more than one chord will be supported. Cover joints to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted: **"FINAL PLANS FOR FIELD USE."** Standard and longspan joints should be aligned properly before completely welding the following bridging and completing the attachment of end bearing seats to existing supporting beams.
- JOISTS FOR LONGSPANS SHALL NOT BE RELEASED UNTIL THE BRIDGES, THE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO THE FIRST TWO JOIST SPANS AND THE JOISTS ON SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING THE JOISTING BEAMS.**
- Beams joists had bays if needed to prevent lateral displacement during installation of bridging.
- Bottom chord bearing joints also be placed at ends until all bridging is installed. Bottom chord bearing joints shall be installed in the following order:
- DO NOT APPLY ANY LOADS JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**
- When starting chord or centering on joints, after the installation of all bridging, the beams should be pulled up with cables or beams using several smaller stocks in lieu of fewer large ones. Use extreme care in pulling and overloading the joints.
- (4) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- (5) Vulcraft Division must be notified at once if joints and accessories cannot be erected in place.
- VULCRAFT DIVISION WILL BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
- DO NOT CUT AWAY ANY CHORDS OR WEBS.**
- DO NOT COMPLETELY WEED STANDARD JOISTS TO BEARING SUPPORTS UNTIL THE JOISTS ARE ALIGNED AND THE JOIST JOINTS ON THE SAME SIDE AND END OF THE JOIST ARE PROPERLY ATTACHED TO THE JOIST JOINTS.**
- Do any alignment necessary during the installation of bridging. After installation do bridging, complete the attachment to the joist bearing support.
- Do not attempt to align joints or install the joist joints in groups after installation of bridging and attachment to the joist bearing support. Do not attempt to align the joist joints and permanent attachment to bearing support after installation of bridging.
- Do not dump or throw joints off of truck, or damage will result.
- (5) Vulcraft joints are fabricated to meet the erection requirements of the Occupancy, Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS**

## NOTES

1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCFRAT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CARRIED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD OR AT NO EXPENSE TO VULCFRAT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT. RED
6. PAINT—ONE SHOP COAT.
7. BRIDGING—4"x12"x12" HORIZONTAL
8. BRIDGING—
9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
10. N.I.C.—NOT IN VULCFRAT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.



# FINAL PLANS FOR FIELD USE

MAY 24 1976

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DATE	POINTS	FOR
	CV 1	FOR LICHTENWALD - JOHNSTON IRON WORKS C
OCT 20 1975	APP 5	AT MORTON GROVE, ILLINOIS
NOV 1 1975	APP 13	SHIP TO JOB SITE
DEC 2 1975	APP 15	AT AUBURN, ILLINOIS
FEB 3 1976	APP 5	JOB MIDDLE SCHOOL
	FIN 8	ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO

## VIII CRAFT

A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

INSTITUTIONAL

DRAWN BY	ARM	DATE	10-13	CHK'D BY	DM	DATE	10-17
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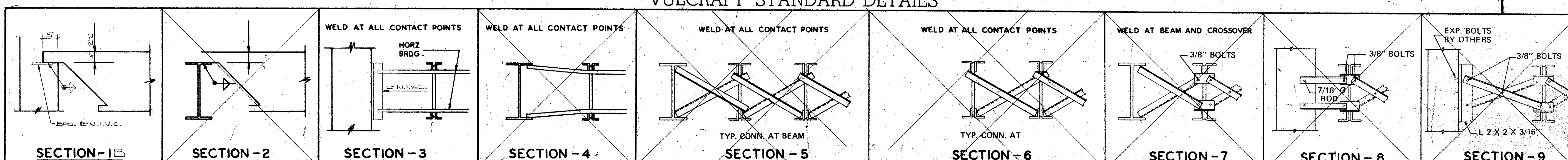
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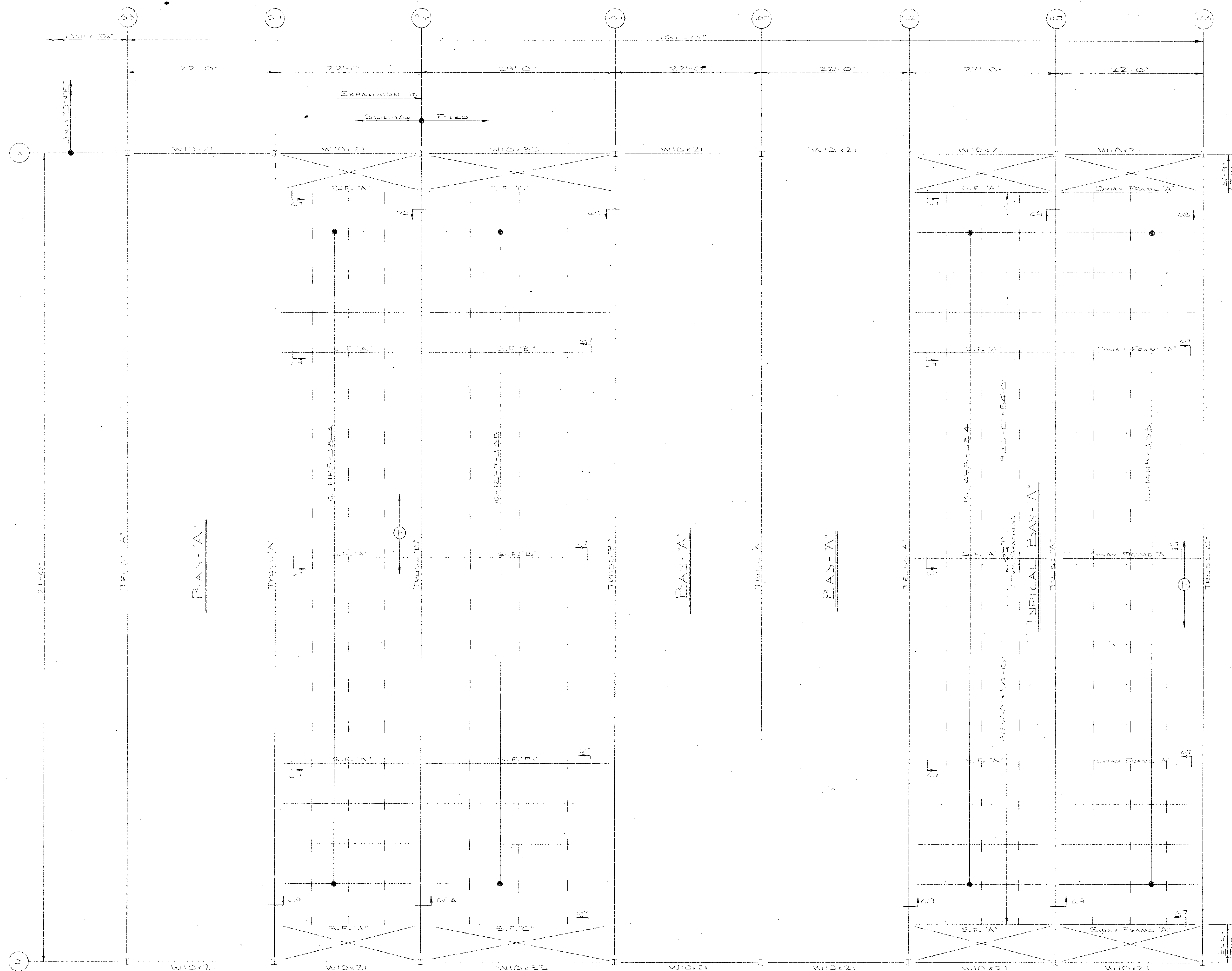
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JOIST FRAMING PLAN AT ROOF OF UNIT 'F'  
SCALE 1/8"=1'-0"

## IMPORTANT

### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- (2) WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joist.
- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE". Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.

**HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET, TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET, FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**

Brace joists in and bays if needed to prevent lateral displacement during installation of bridging.

Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.

- (5) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**

When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.

- (6) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.

- (7) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.

**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**

- (8) **DO NOT CUT AWAY ANY CHORDS OR WEBS.**

**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Fast weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.

Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck, as damage will result.

- (9) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

## NOTES

1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS, EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT GRAY
6. PAINT—ONE SHOP COAT GRAY
7. BRIDGING— 1 1/2" x 1 1/2" x 1/4" HORIZONTAL
8. BRIDGING—
9. PLACE TAGGED END OF JOIST WHERE INDICATED THIS 1
10. N.Y.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLANS  
FOR FIELD USE

MAY 24 1976

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DATE	PRINTS	FOR
APR 1976	1	AT MORTON GROVE, ILLINOIS
APR 1976	1	SHIP TO JOB SITE
APR 1976	1	AT AUBURN, ILLINOIS
APR 1976	1	JOB MIDDLE SCHOOL
APR 1976	1	ARCHITECT
APR 1976	1	REPRESENTATIVE BUILDERS' STRUCTURAL STEEL CO.

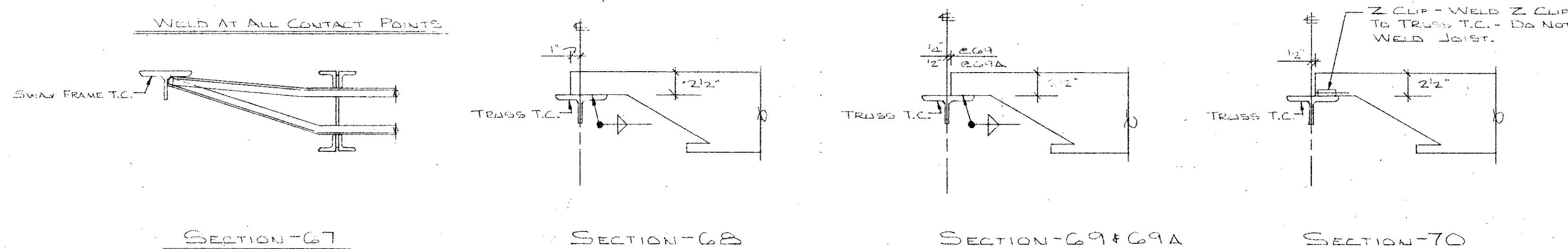
VULCRAFT

A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

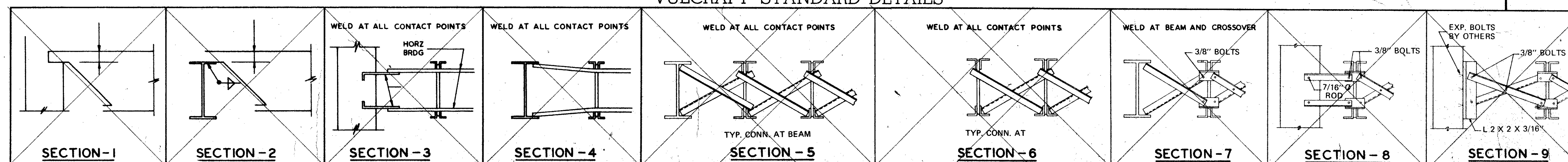
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REVISIONS: 1 DATE: 4-17-76

FILE No. 02-5-1194 DRAWING No. E10 OF 11



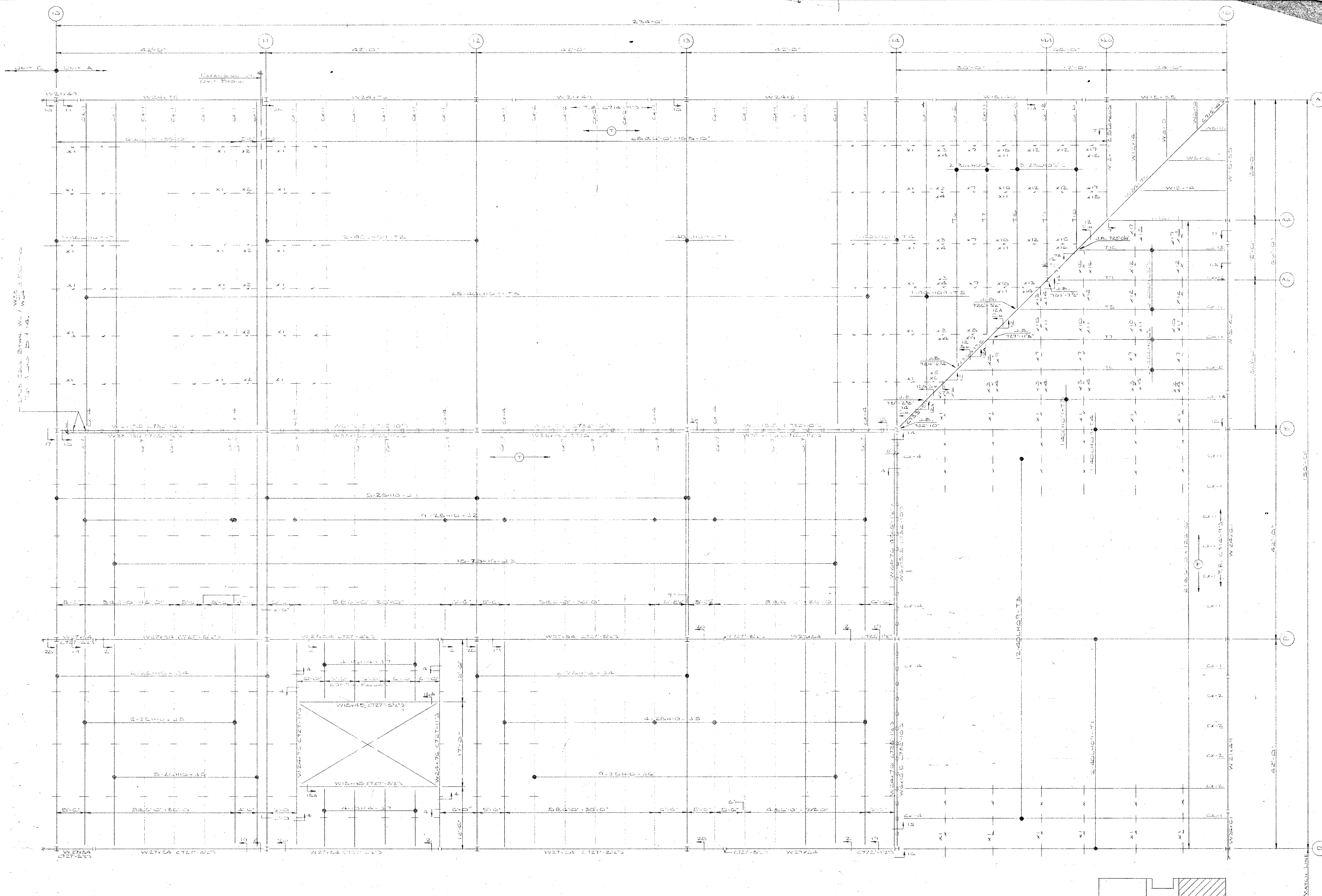
## VULCRAFT STANDARD DETAILS












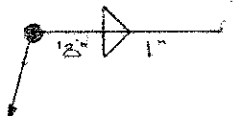

PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT "A"  
SCALE: 1/8"=1'-0"

### IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS  
FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS. PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joist.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.  
Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- DO NOT CUT AWAY ANY CHORDS OR WEBS.  
DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

### NOTES

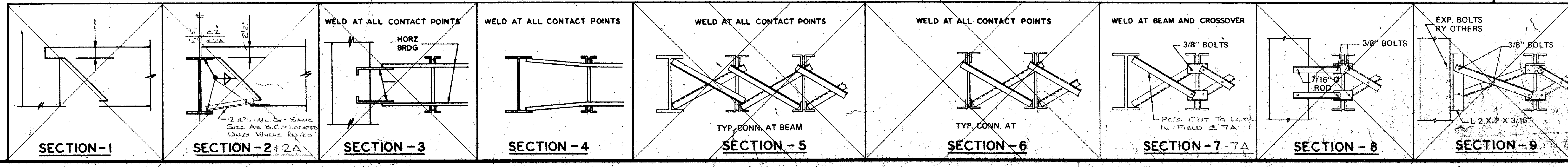
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- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT RED
- PAINT—ONE SHOP COAT
- BRIDGING— $\frac{1}{2}$ " x  $\frac{1}{2}$ " x 6' HORIZONTAL
- BRIDGING— $\frac{1}{2}$ " x  $\frac{1}{2}$ " x 6' BOLTED DIAGONAL
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.
- TYPICAL WELDES:
  - SHORT SPANS 
  - LONG SPANS 

FINAL PLANS  
FOR FIELD USE

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DATE	PRINTS	FOR LICHENWALD-JOHNSON IRON WORKS CO.
NOV 13 1975	APP 1	AT MORTON GROVE, ILLINOIS
NOV 13 1975	APP 15	SHIP TO JOB SITE
NOV 13 1975	APP 15	AT AURORA, ILLINOIS
NOV 13 1975	FIN 8	JOB MIDDLE SCHOOL
NOV 13 1975		ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

### VULCRAFT STANDARD DETAILS

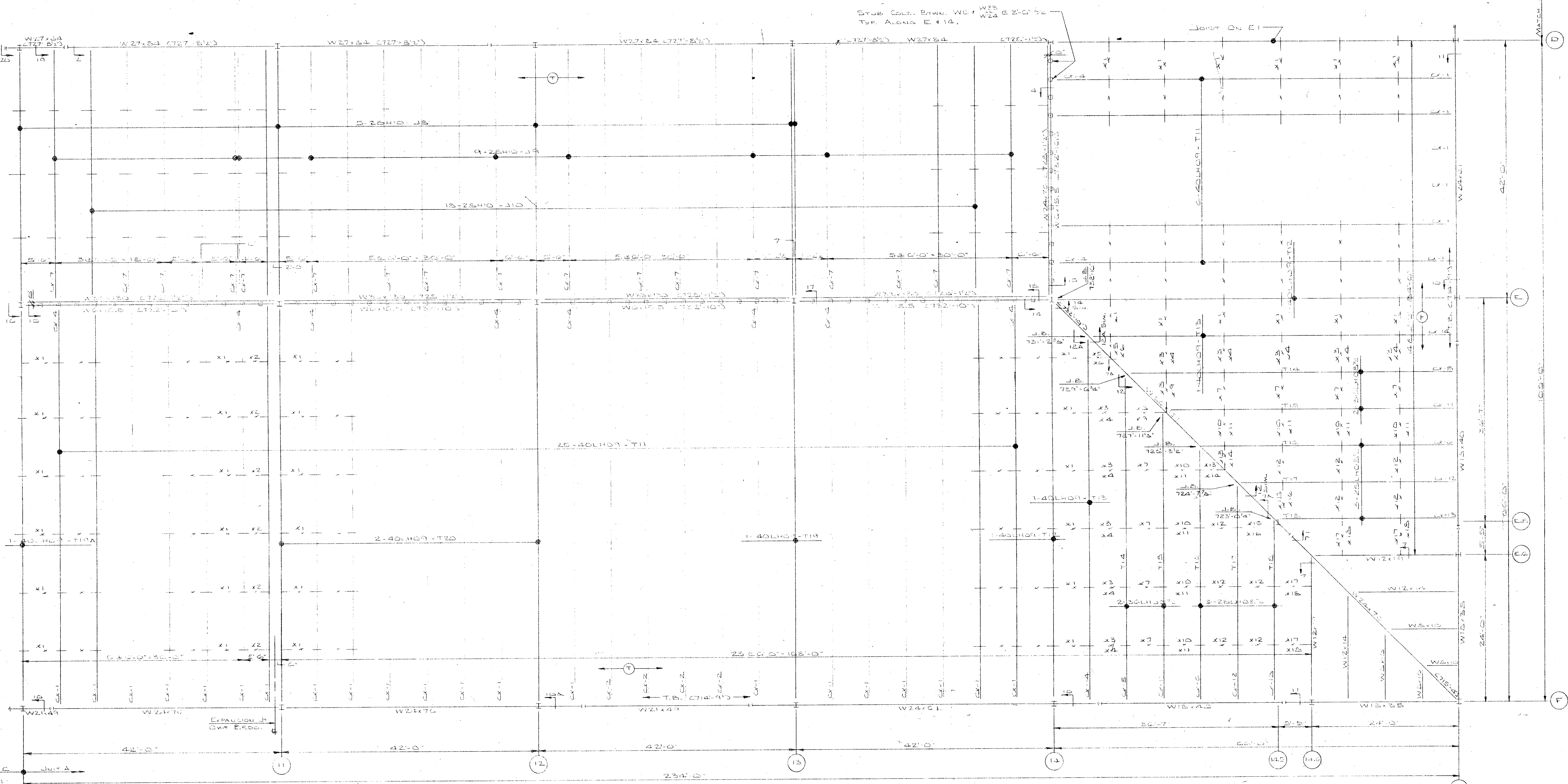


**VULCRAFT**  
A DIVISION OF HUCOR CORPORATION  
P.O. BOX 1000 ST. JOE, INDIANA 46785

DRAWN BY: ARN DATE: 11/13/75 CHECKED BY: JDM DATE: 11/13/75  
No. 1215-3194 REVISIONS DATE

FILE No. 1215-3194 DRAWING No. 11 OF 11





- ### IMPORTANT
- #### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS
- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
  - WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
  - Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE". Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- #### HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
- Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
- Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
  - When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
  - Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.
  - VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
  - DO NOT CUT AWAY ANY CHORDS OR WEBS.
  - DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.
  - Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

- ### NOTES
- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
  - ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
  - JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
  - CEILING EXTENSIONS ARE NOT FURNISHED.
  - PAINT—ONE SHOP COAT Red
  - PAINT—ONE SHOP COAT
  - BRIDGING—1 1/2\"/>

**FINAL PLANS FOR FIELD USE**  
MAY 24

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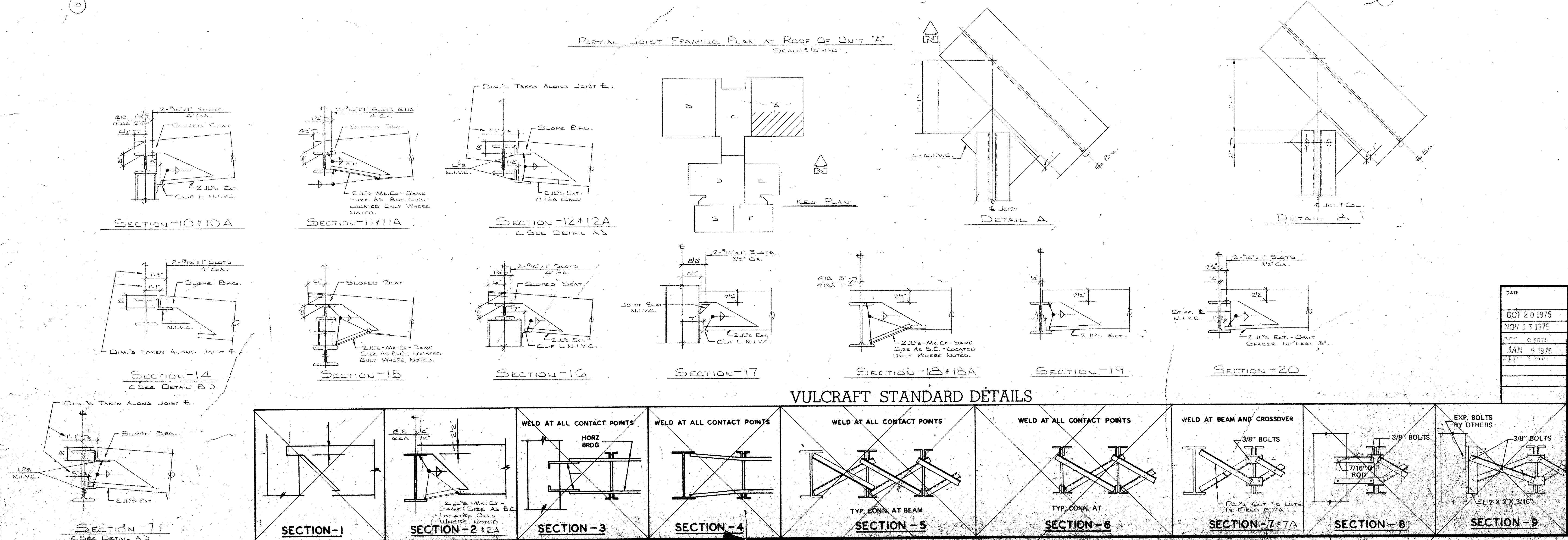
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OCT 20 1975	CL 1	AT MORTAN GROVE, ILLINOIS
NOV 13 1975	APP 5	SHIP TO JOB SITE
JAN 5 1976	ADD 15	AT AUBURN, ILLINOIS
JAN 5 1976	FIN 6	JOB MIDDLE SCHOOL
JAN 5 1976	FIN 8	ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

**VULCRAFT**  
A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000  
ST. JOE, INDIANA 46785

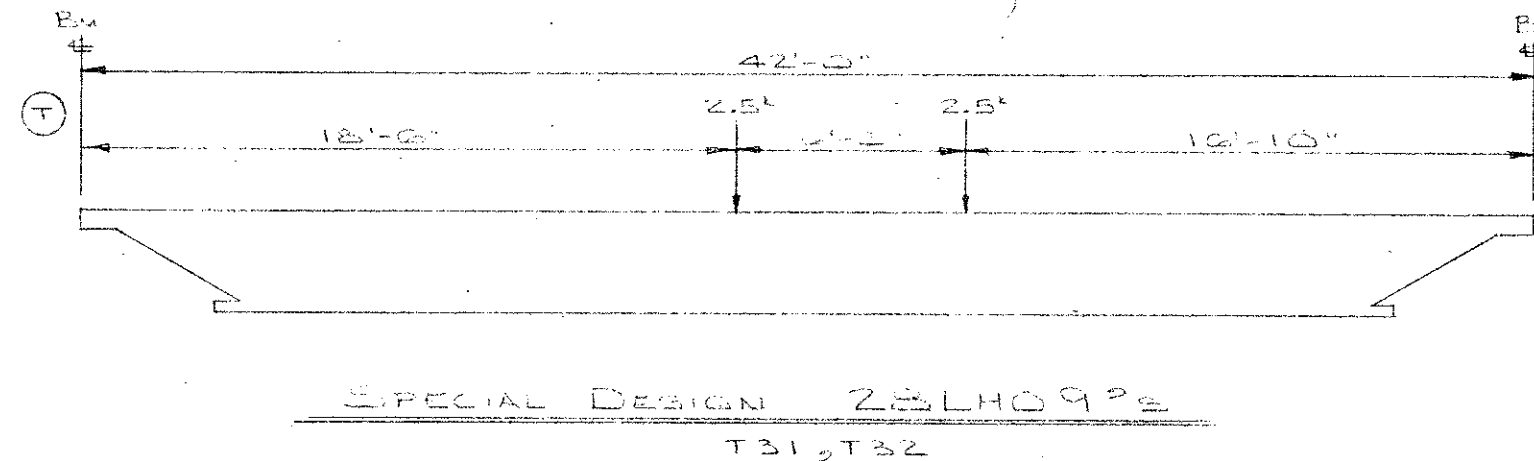
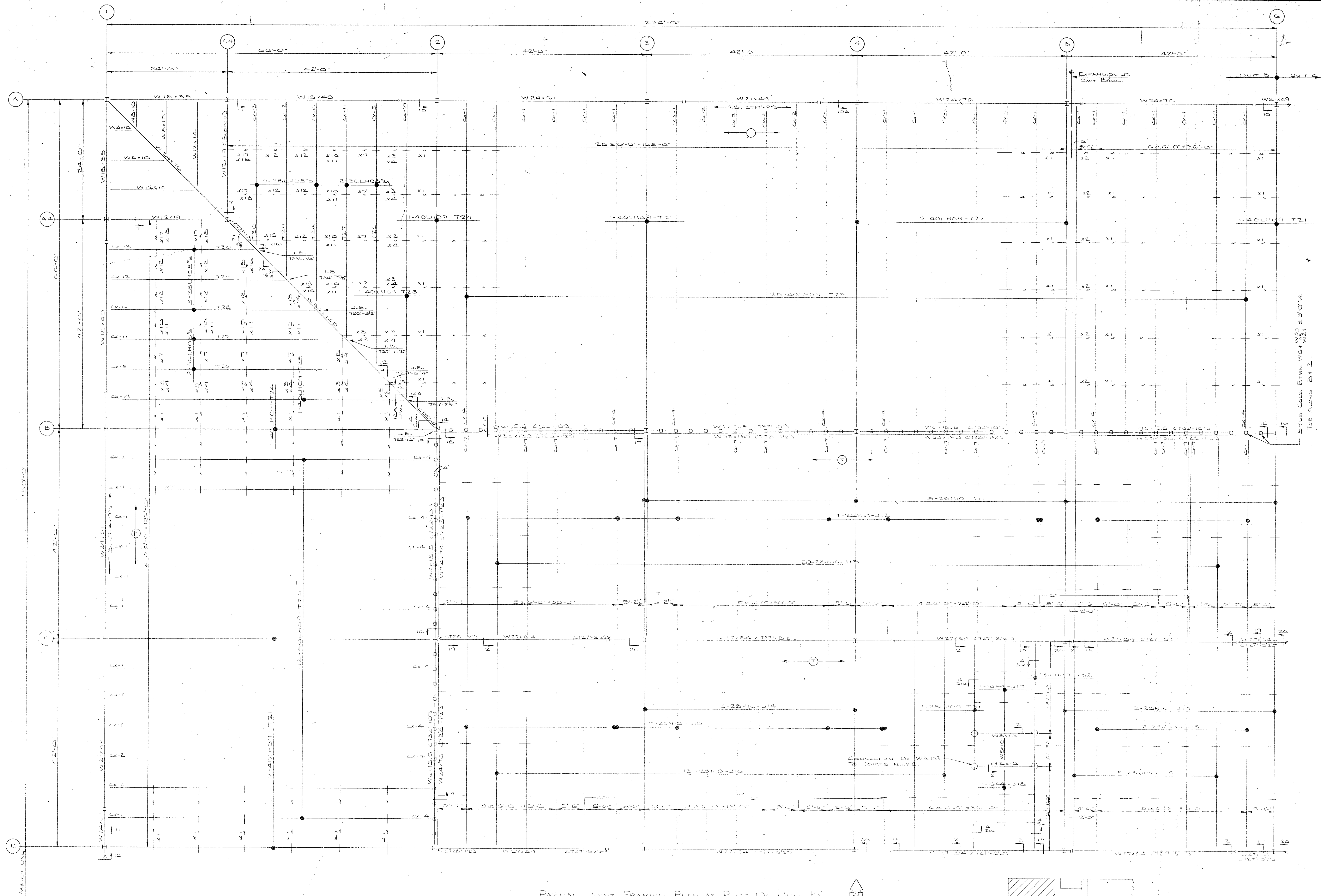
DRAWN BY: K.E.W. DATE: 2-20-75 BY: DATE: 1-16-76

REVISIONS

FILE No. 02-5-1194 DRAWING No. E2 0







PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT B  
SCALE 1/8" = 1'-0"

### IMPORTANT RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
  - (2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
  - (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
**HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**  
Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is in place and permanent lateral stability is provided.
  - (5) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**  
When standing deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - (6) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
  - (7) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
  - (8) **DO NOT CUT AWAY ANY CHORDS OR WEBS.**  
**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck as damage will result.
  - (9) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

### NOTES

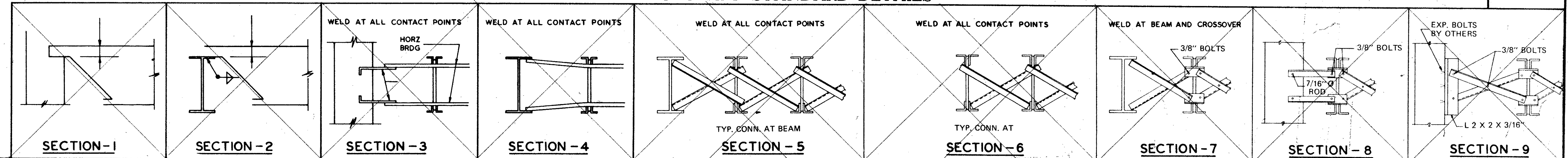
1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT RED
6. PAINT—ONE SHOP COAT
7. BRIDGING—L14x14x5 HORIZONTAL
8. BRIDGING—L14x14x5 BOLTED DIAPHRAGM
9. PLACE TAGGED END OF JOIST WHERE INDICATED THIS
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

**FINAL PLAN  
FOR FIELD USE**  
MAY 24 1976

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DATE	PRINTS	FOR
4-11-76	1	FOR LICHTENWALD-JOHNSTON IRON WORKS CO.
4-11-76	1	AT MORTON GROVE, ILLINOIS
4-11-76	1	SHIP TO JOB SITE
4-11-76	1	AT ALBANY, ILLINOIS
4-11-76	1	JOB MIDDLE SCHOOL
4-11-76	1	ARCHITECT
4-11-76	1	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

### VULCRAFT STANDARD DETAILS



A DIVISION OF NUCOR CORPORATION P. O. BOX 1000 ST. JOE, INDIANA 46785	
DRAWN BY: ARW DATE: 10-3 REVISIONS: 1 FILE No. 33-0011-1	CWD BY: JDM DATE: 10-3 REVISIONS: 1 DRAWING No. E-1 OF 11

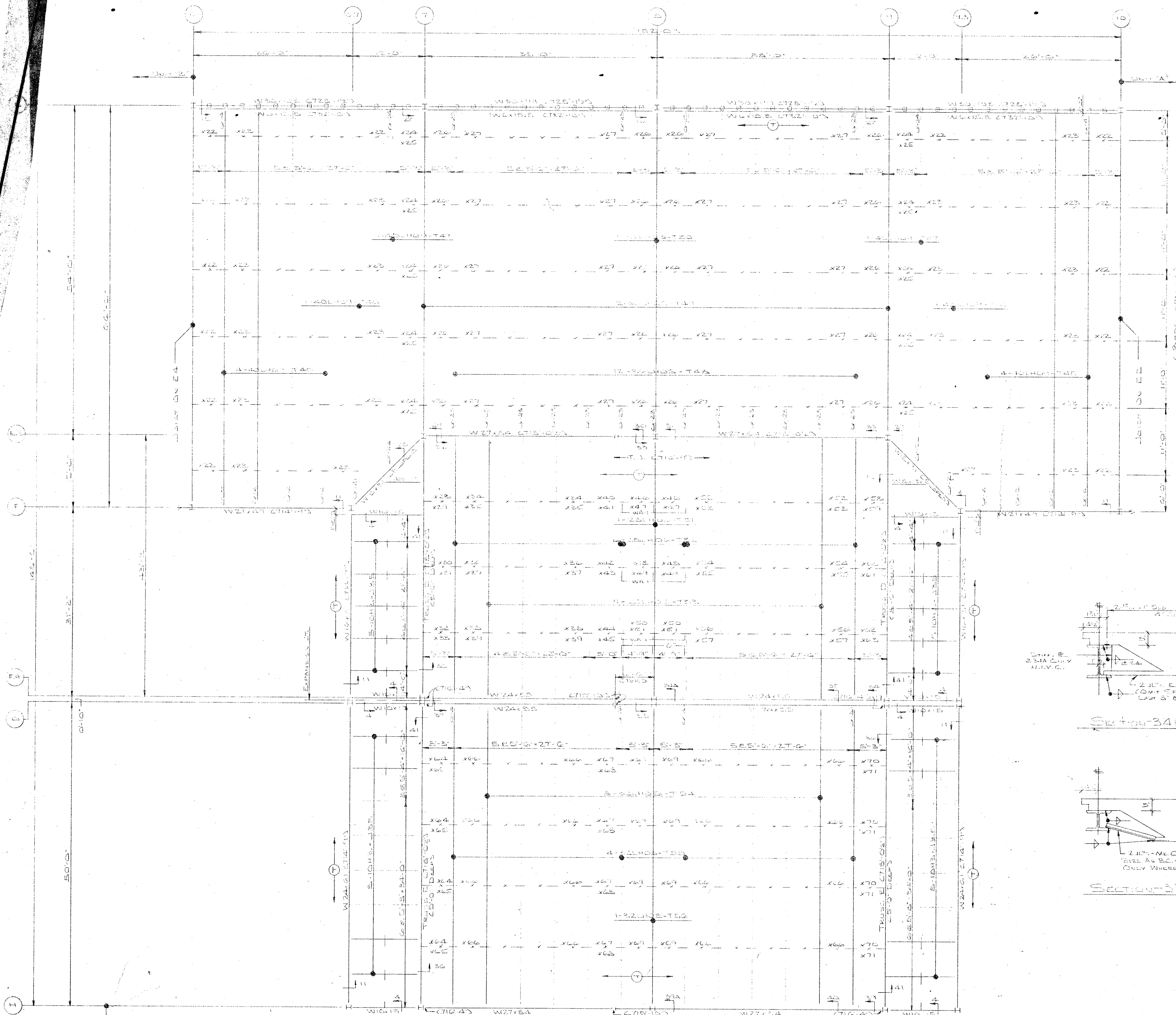




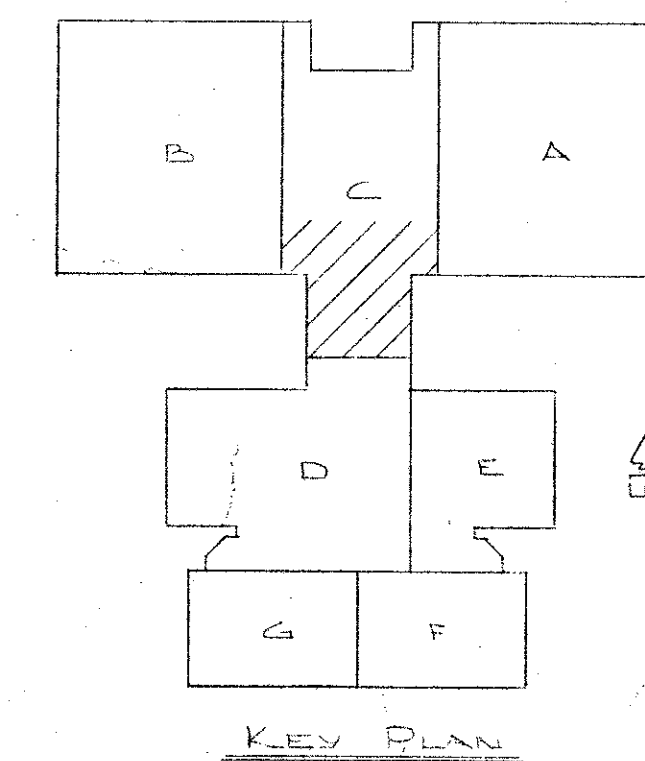




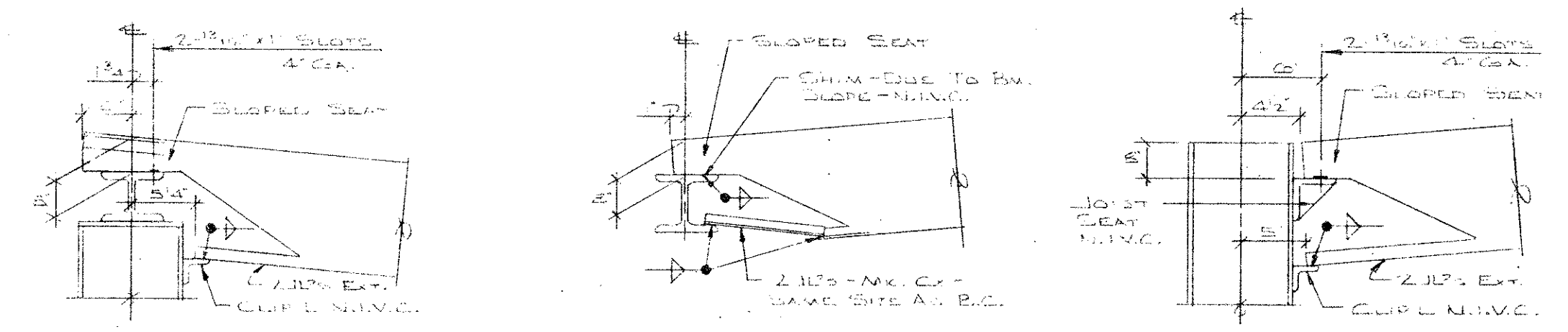




PARTIAL JOIST FRAMING PLAN AT RIDGE OF UNIT "C"  
SECTION-10



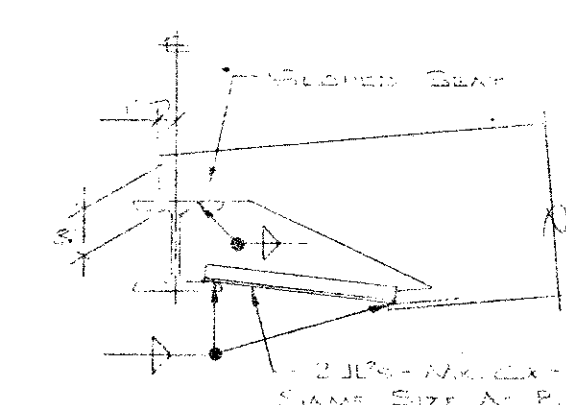
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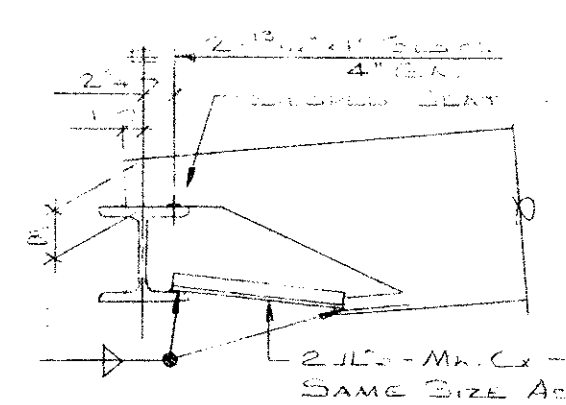
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SECTION-28

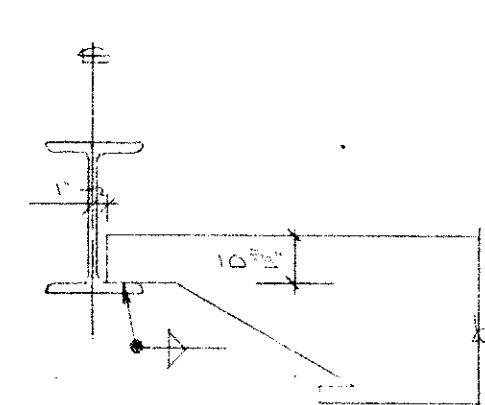
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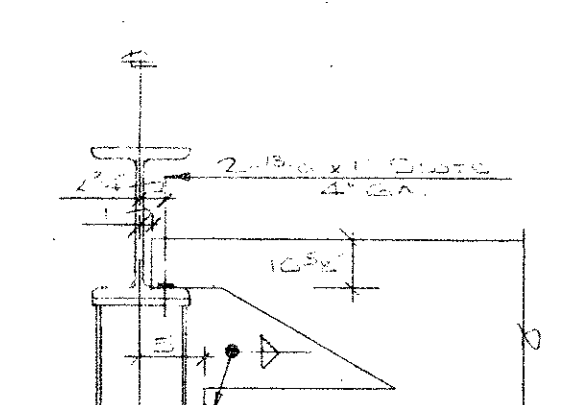
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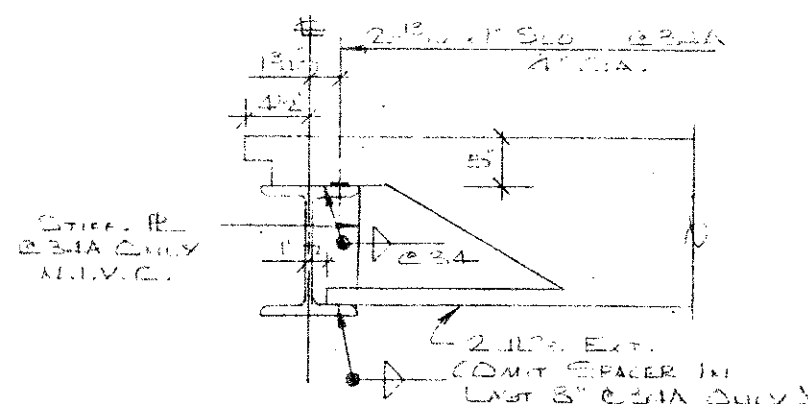
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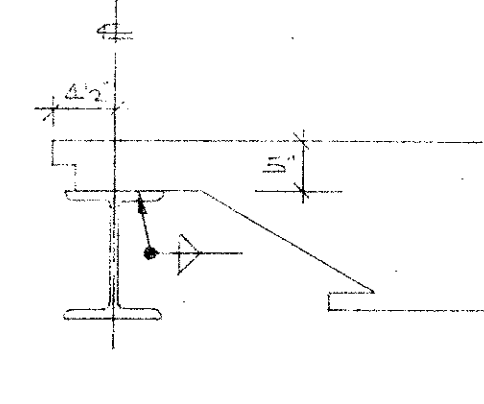
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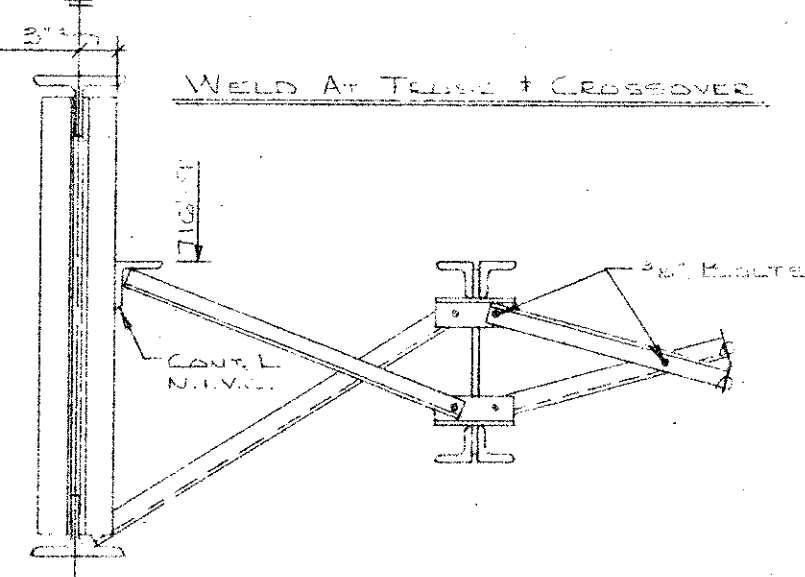
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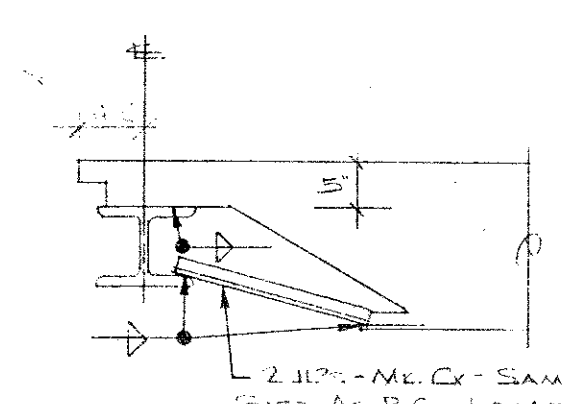
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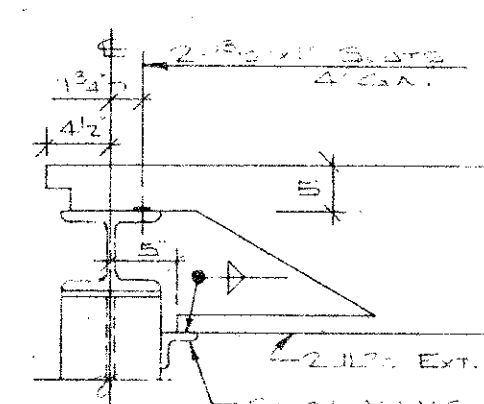
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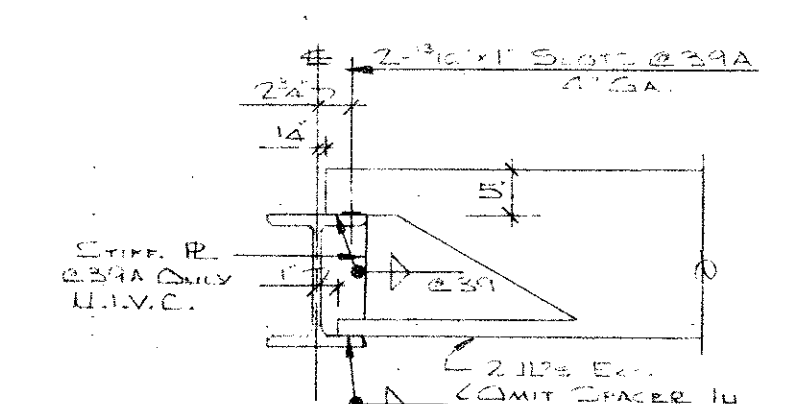
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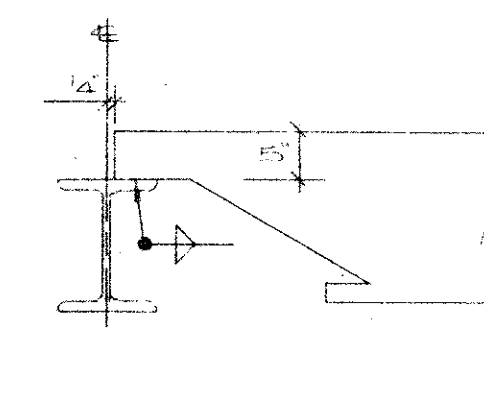
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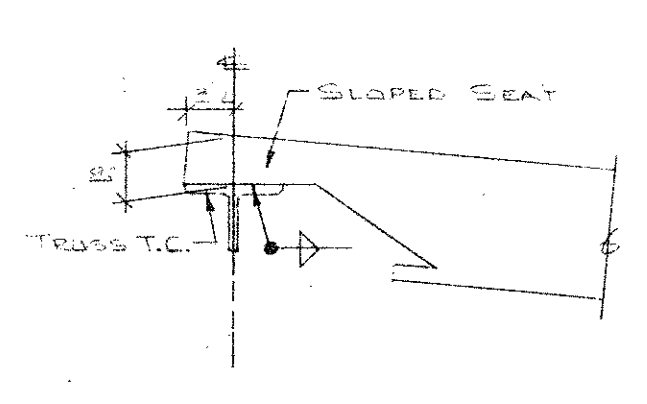
SECTION-38



SECTION-39



SECTION-40



SECTION-41

### IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER

- Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- HOISTING CABLES FOR LONGSPAN JOISTS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
- Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
- Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
- When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.
- VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- DO NOT CUT AWAY ANY CHORDS OR WEBS.
- DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.
- Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.
- Do not dump or throw joists off of truck, as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

### NOTES

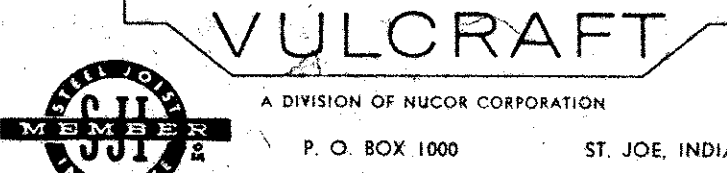
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- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT.
- PAINT—ONE SHOP COAT.
- BRIDGING—1 1/2" x 12" x 1/2" HORIZONTAL.
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS .
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

### FINAL PLANS FOR FIELD USE

MAY 24 1976

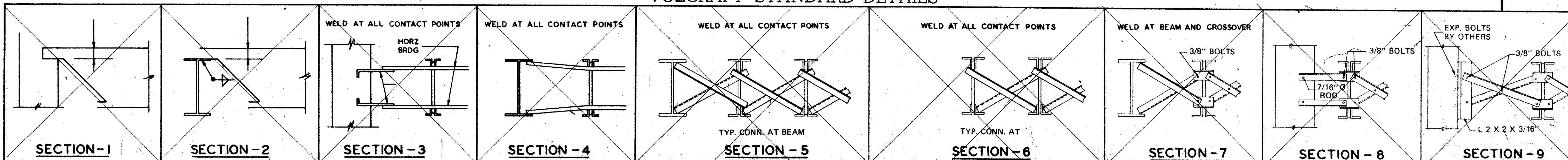
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DATE	PRINTS	FOR LICHENWALD-JOHNSON IRON WORKS CO.
001 03 1976	AK 1	AT MORTON GROVE, ILLINOIS
002 03 1976	AP 2	SHIP TO JOB SITE
003 03 1976	APP 3	AT ABERNATHY, ILLINOIS
004 03 1976	FIN 4	FOR MIDDLE SCHOOL
		ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

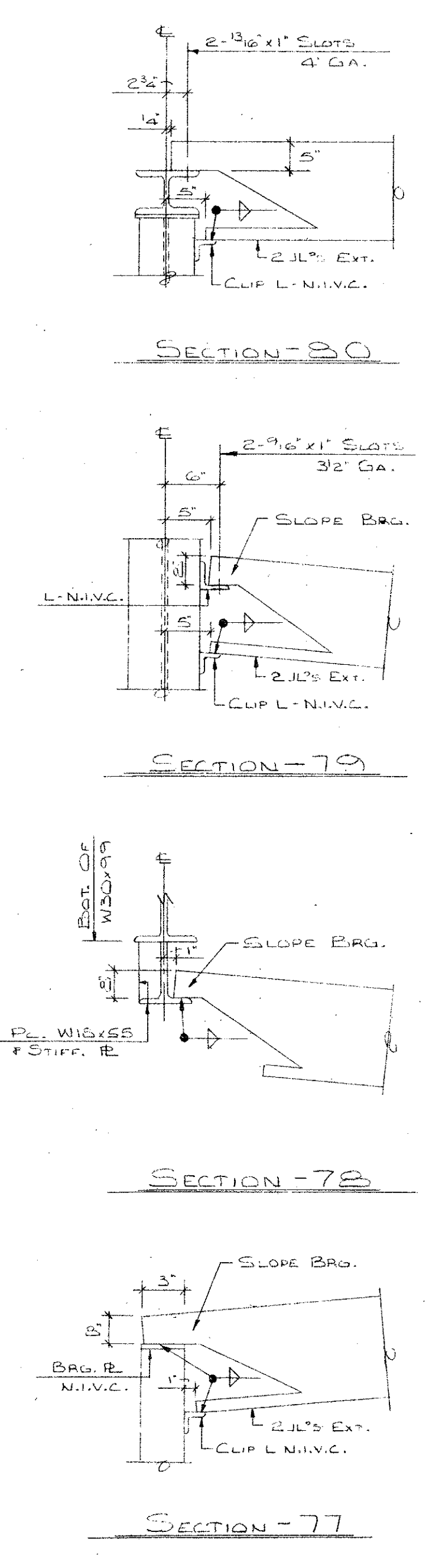
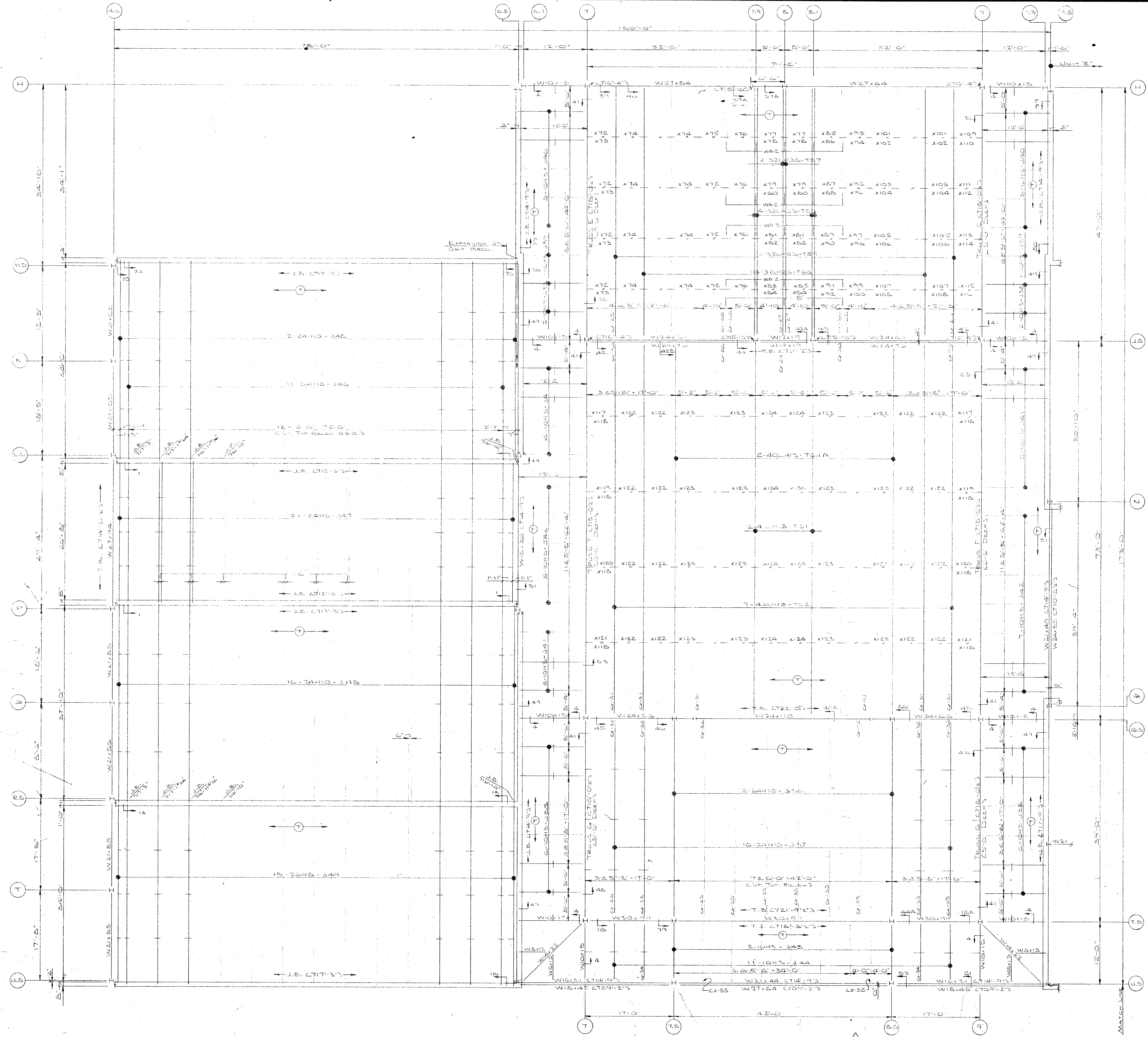


DRAWN BY	AEW	DATE	10-9	CHK BY	DM	DATE	10-16-76
NO.		REVISIONS					
FILE NO.	02-5-1194	DRAWING No.	EG	OF			

### VULCRAFT STANDARD DETAILS








# IMPORTANT

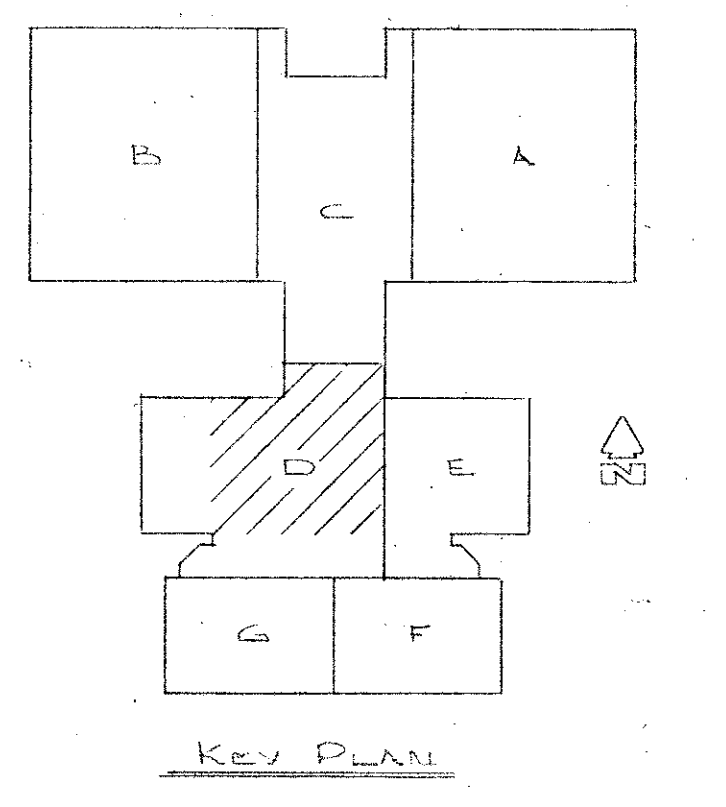
## RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKET ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- When unloading by crane always hook chains or slings to TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joist.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET, TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET, AND THREE LINES ON SPANS OVER 100 FEET. ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES. Brace joists in end bays if needed to prevent lateral displacement during installation of bridging. Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
- When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
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- DO NOT CUT AWAY ANY CHORDS OR WEBS. DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck, as damage will result.
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# NOTES

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- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT **RED**
- PAINT—ONE SHOP COAT
- BRIDGING—**L 1/2" X 1/2" X 1/2"** **HORIZONTAL**
- BRIDGING—**L 1/2" X 1/2" X 1/2"** **BOLTED DIAG.**
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

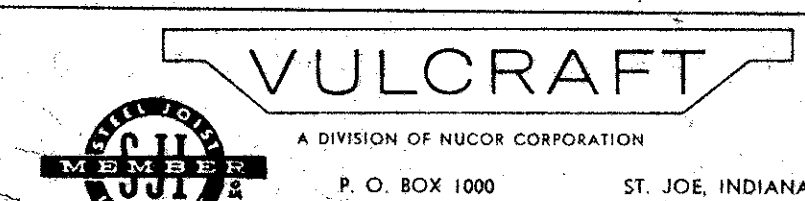


# FINAL PLANS FOR FIELD USE

MAY 24 1976

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DATE	PRINTS	FOR LITCHENWALD-JOHNSTON IRON WORKS CO.
DEC 1	1	AT MORTON GROVE, ILLINOIS
DEC 1	1	SHIP TO JOB SITE
DEC 1	1	AT AUBURN, ILLINOIS
DEC 1	1	JOB MIDDLE SCHOOL
ARCHITECT		
REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.		

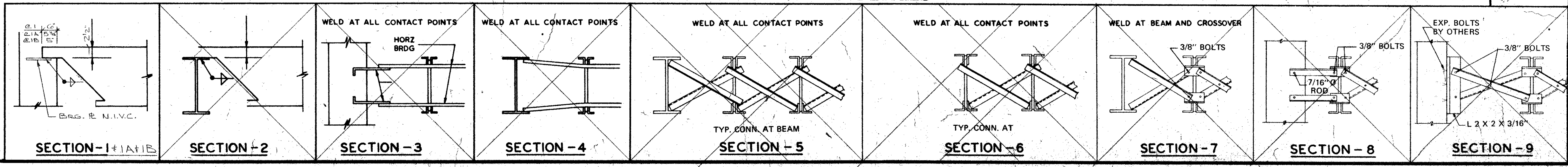


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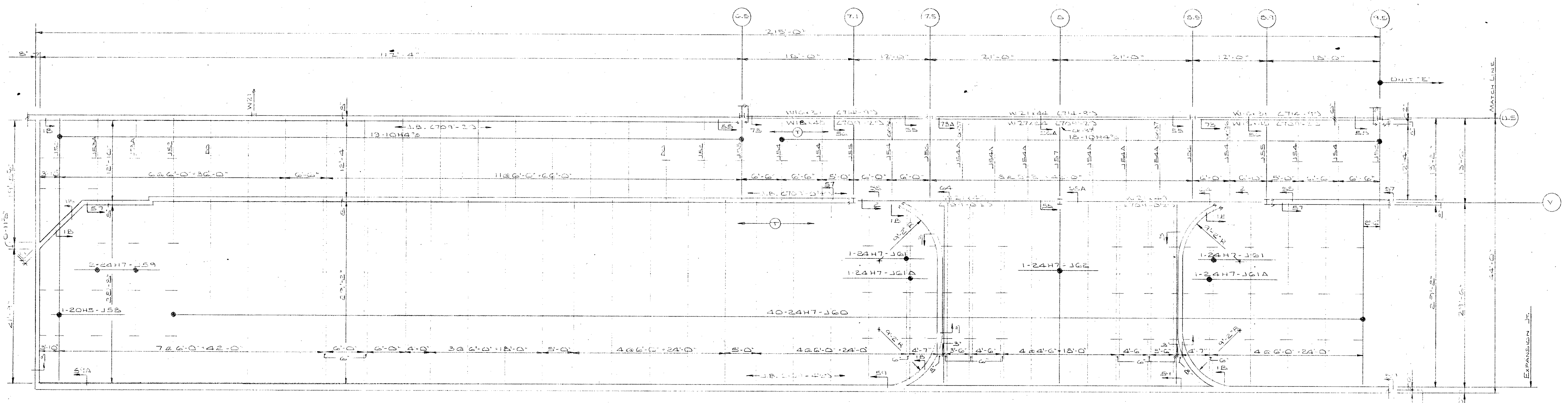
REVISIONS

FILE No. 02-5-1194 DRAWING No. 57 OF 11

## VULCRAFT STANDARD DETAILS







PARTIAL JOIST FRAMING PLAN AT ELEV. 11.0' UNIT 'D'  
SCALE: 1/8" = 1'-0"

### IMPORTANT

#### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
  - When unloading by crane always hook chains or slings to **TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joist.
  - Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
  - HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET, TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET, AND THREE LINES ON SPANS OVER 100 FEET. ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
  - Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
  - Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
  - DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
  - When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
  - Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.
  - VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
  - DO NOT CUT AWAY ANY CHORDS OR WEBS.
  - DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck, as damage will result.
  - Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

### NOTES

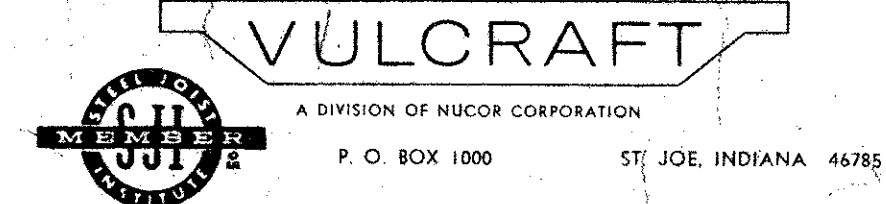
- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAIN—ONE SHOP COAT RED
- PAIN—ONE SHOP COAT
- BRIDGING— $L14 \times 11 \times 1/8"$  HORIZONTAL
- BRIDGING—
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6' LAP.

### FINAL PLANS FOR FIELD USE

MAY 24 1976

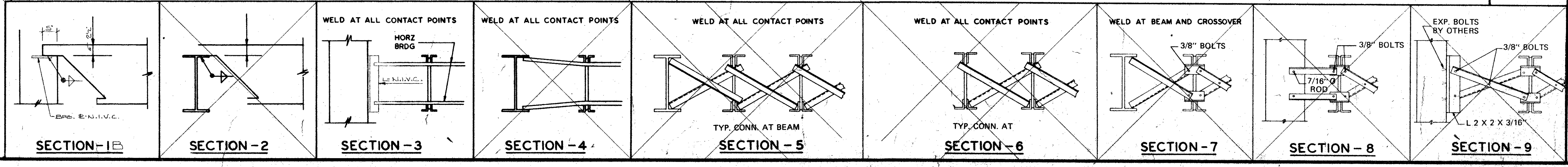
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DATE	PRINTS	FOR
DEC 1 1975	CK 1	FOR LICHTENWALD-JOHNSTON IRON WORKS CO.
	APP 5	AT MORTON GROVE, ILLINOIS
	APP 13	SHIP TO JOB SITE
	APP 13	AT AUBURN, ILLINOIS
	APP 5	JOB MIDDLE SCHOOL
	FIN 8	ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

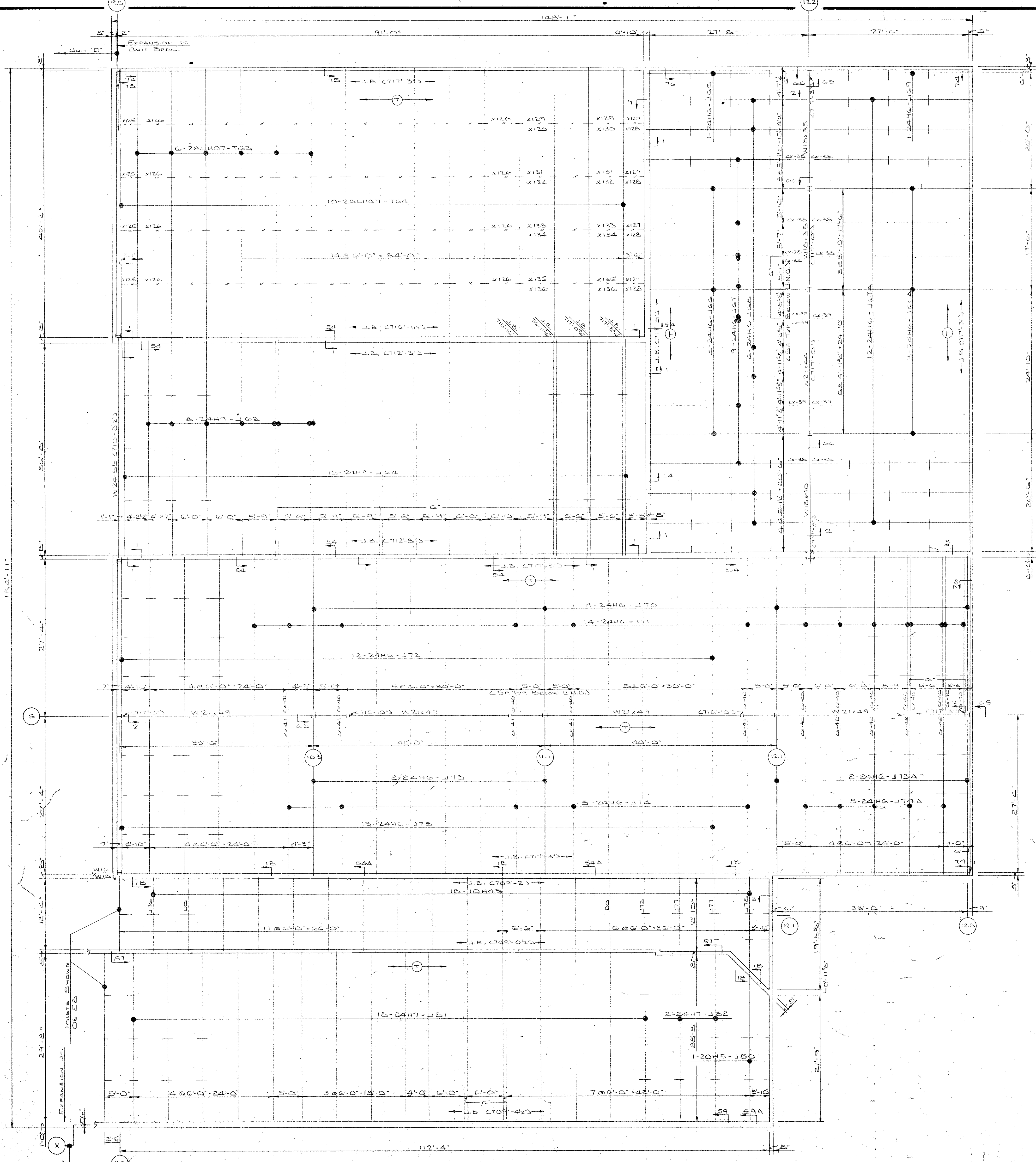


DRAWN BY	DATE	CHK BY	DATE
ARM	5-13-75	CM	5-17-75
No.	REVISIONS	DATE	
85	5		
FILE No. 02-5-1194 DRAWING No. FB OF 11			

### VULCRAFT STANDARD DETAILS

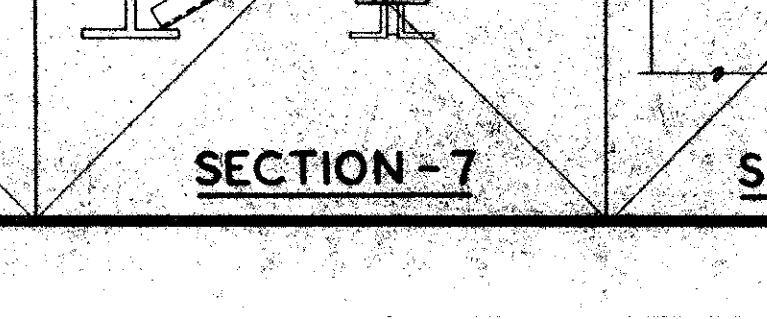
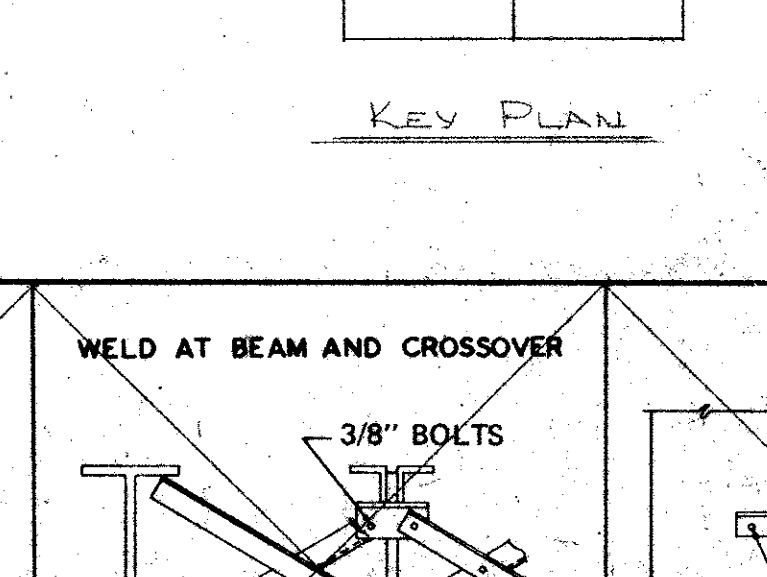
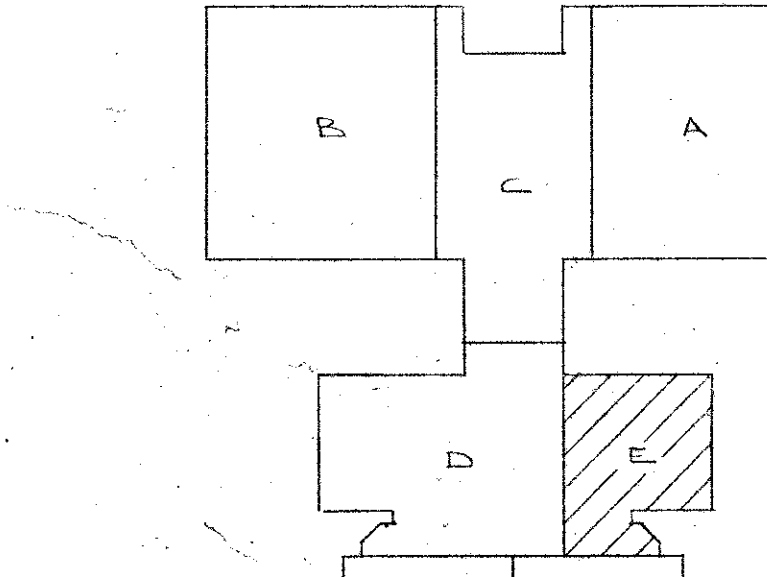
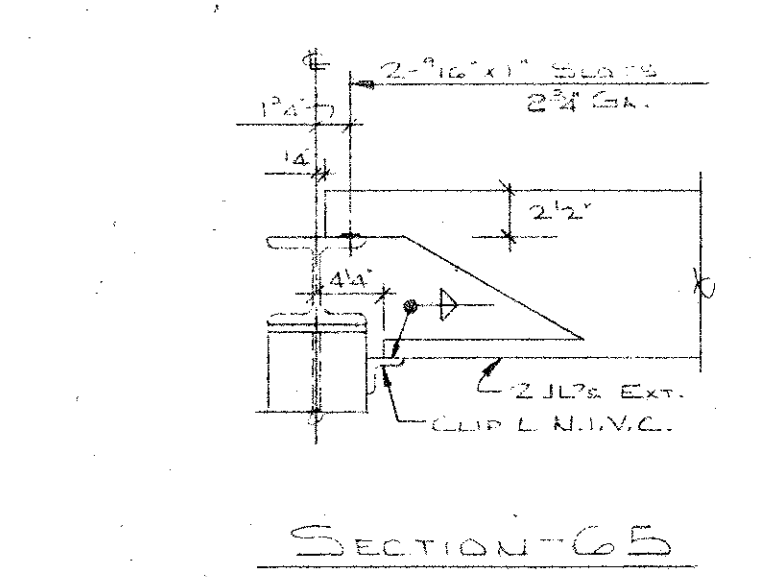
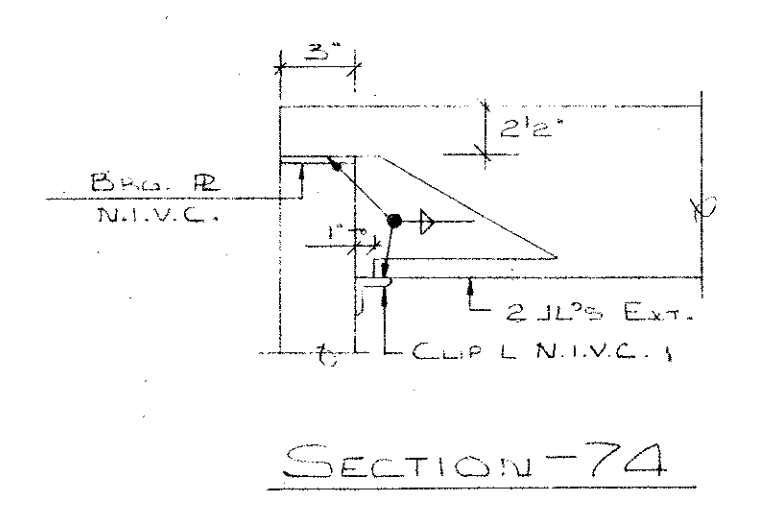
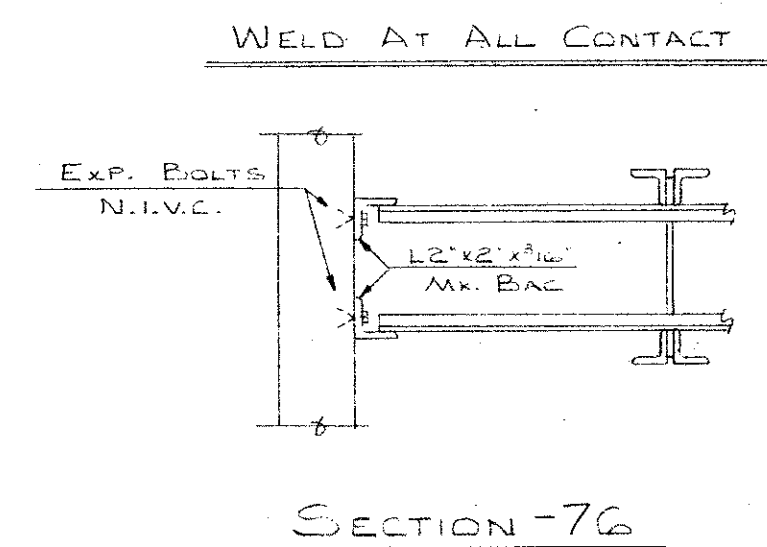
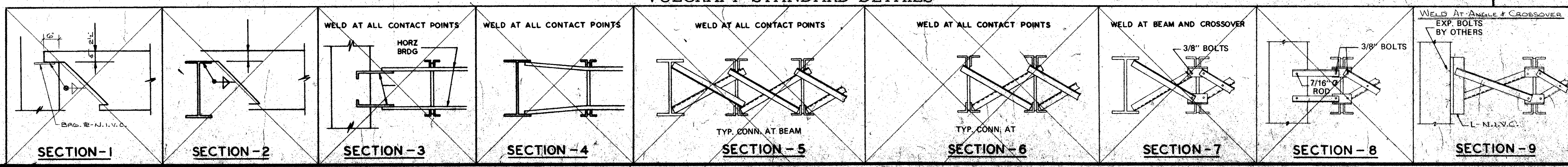






JOIST FRAMING PLAN AT ROOF OF UNIT "E"  
SCALE: 1/8"=1'-0"

VULCRAFT STANDARD DETAILS



IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
  - When unloading by crane **ALWAYS** hook chains or slings to **TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
  - Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET, TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET FOR SPANS OVER 100 FEET. ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.  
Brace joists in end-bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
  - DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
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**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
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Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
  - Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

NOTES

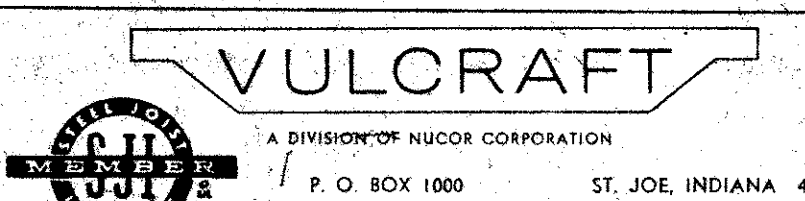
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- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT
- PAINT—ONE SHOP COAT
- BRIDGING—1 1/2"x1 1/2"x1/4" HORIZONTAL
- BRIDGING—1 1/2"x1 1/2"x1/4" BOLTED DIAG.
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLAN  
FOR FIELD USE

MAY 24 1975

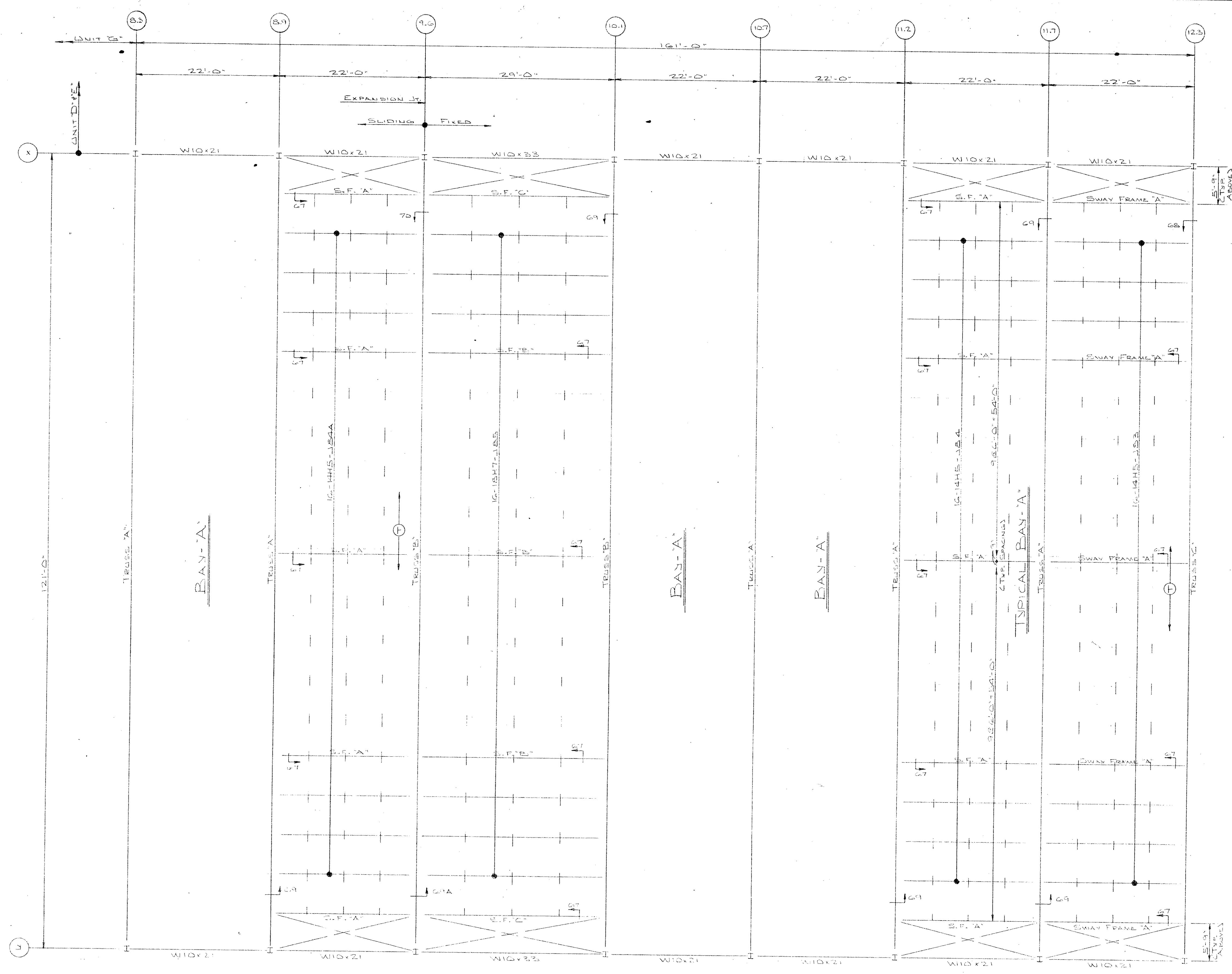
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DATE	PRINTS	FOR
05-11-75	EX 1	AT MORTON GROVE, ILLINOIS
05-11-75	APP 5	SHIP TO JOB SITE
05-11-75	APP 10	AT ALBANY, ILLINOIS
05-11-75	APP 5	JOB MIDDLE SCHOOL
05-11-75	APP 5	ARCHITECT
05-11-75	APP 5	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

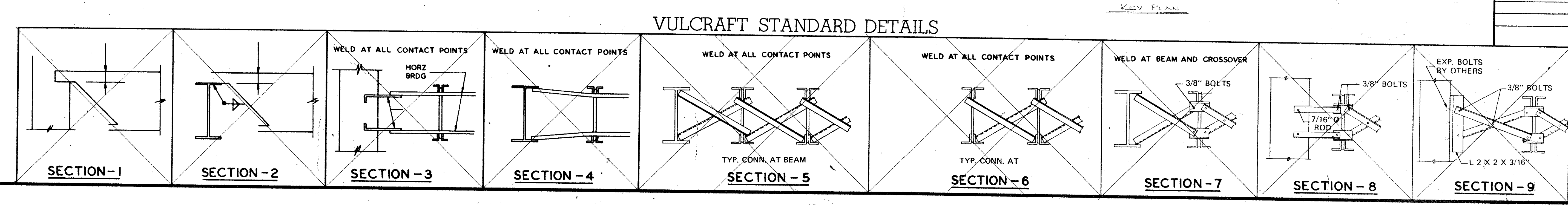
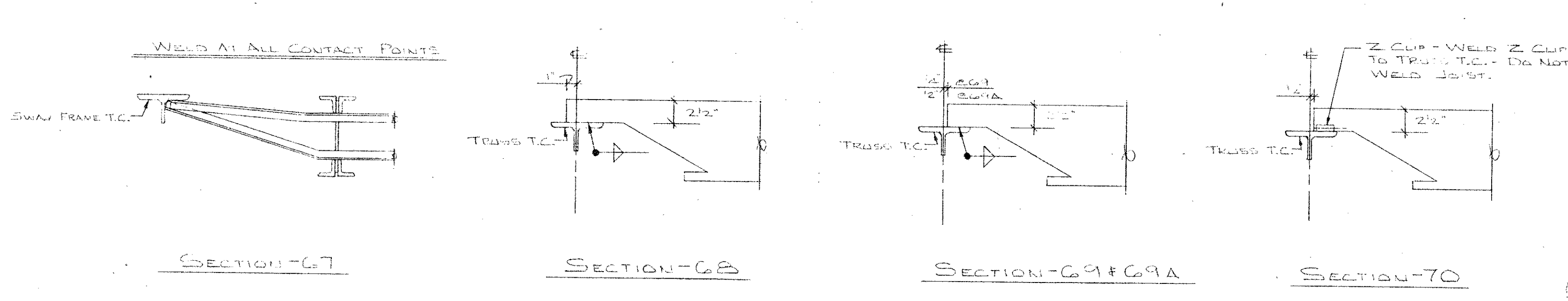


DRAWN BY		ARL	DATE	5-14	CHKD BY	CDM	DATE	5-17
			REVISIONS					
No.								DATE





JOIST TRUSS PLAN AT ROOF OF UNIT 'F'  
SCALE 1/8" = 1'-0"



VULCRAFT STANDARD DETAILS

### IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- (2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- (5) **HOISTING CABLES FOR LONGSPAN SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.** Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- (6) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.** When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in line of lower large stacks. Use extreme care to avoid overloading the joists.
- (7) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
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- (9) **DO NOT CUT AWAY ANY CHORDS OR WEBS.** **DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck, as damage will result.
- (10) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

### NOTES

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2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT GRAY
6. PAINT—ONE SHOP COAT
7. BRIDGING—1 1/2" x 1/2" x 1/4" HORIZONTAL
8. BRIDGING—
9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS T
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLANS  
FOR FIELD USE

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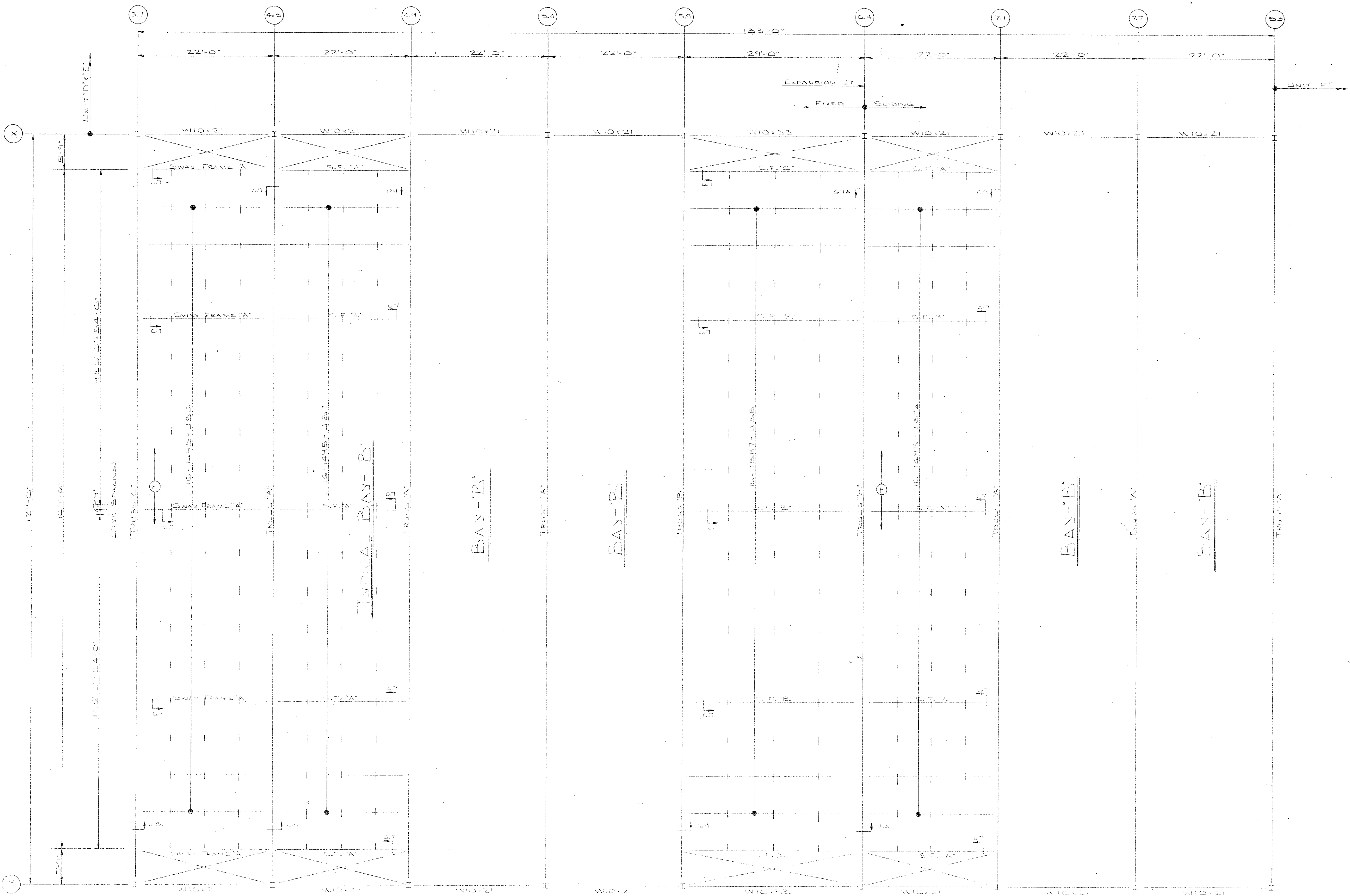
MAY 24 1976

DATE	PRINTS	FOR
5/24/76	1	FOR LITCHENWALD-JOHNSON 1800 W. MAIN ST. AT MORTON GROVE, ILLINOIS
5/24/76	1	SHIP TO JOB SITE
5/24/76	1	AT AURORA, ILLINOIS
5/24/76	1	JOB: MIDDLE SCHOOL
5/24/76	1	ARCHITECT: REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

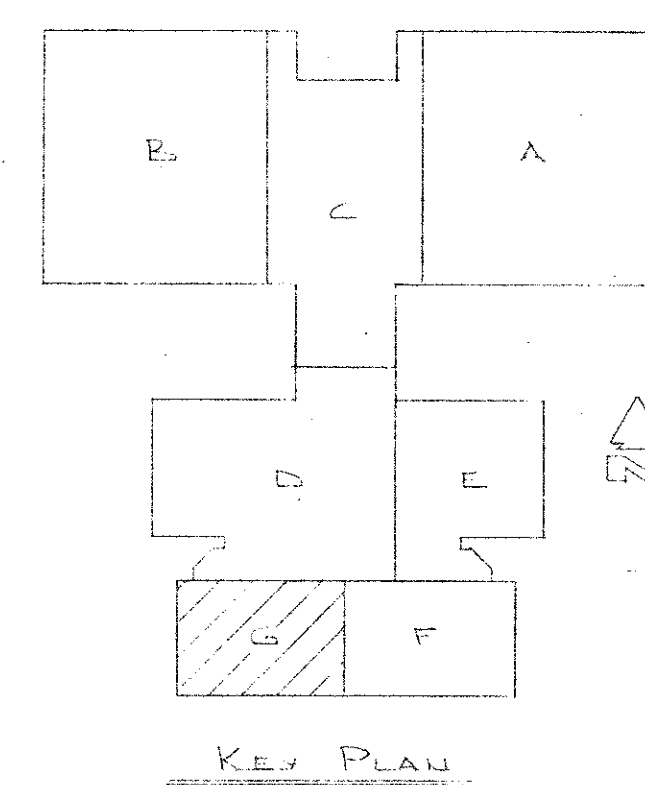
NO.	REVISIONS	DATE
1	AS SHOWN	5/24/76

FILE No. 02-B-1194 DRAWING No. 1 OF 1





JOIST FRAMING PLAN AT RAIL OF UNIT 'G'  
SCALE: 1/8" = 1'-0"



# IMPORTANT

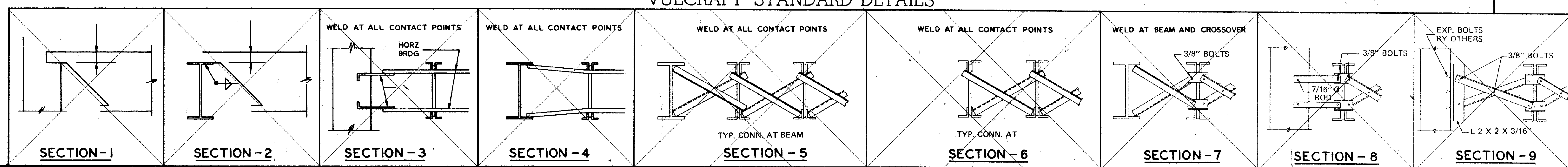
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- PAINT—ONE SHOP COAT
- BRIDGING—
- BRIDGING—
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
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## VULCRAFT STANDARD DETAILS

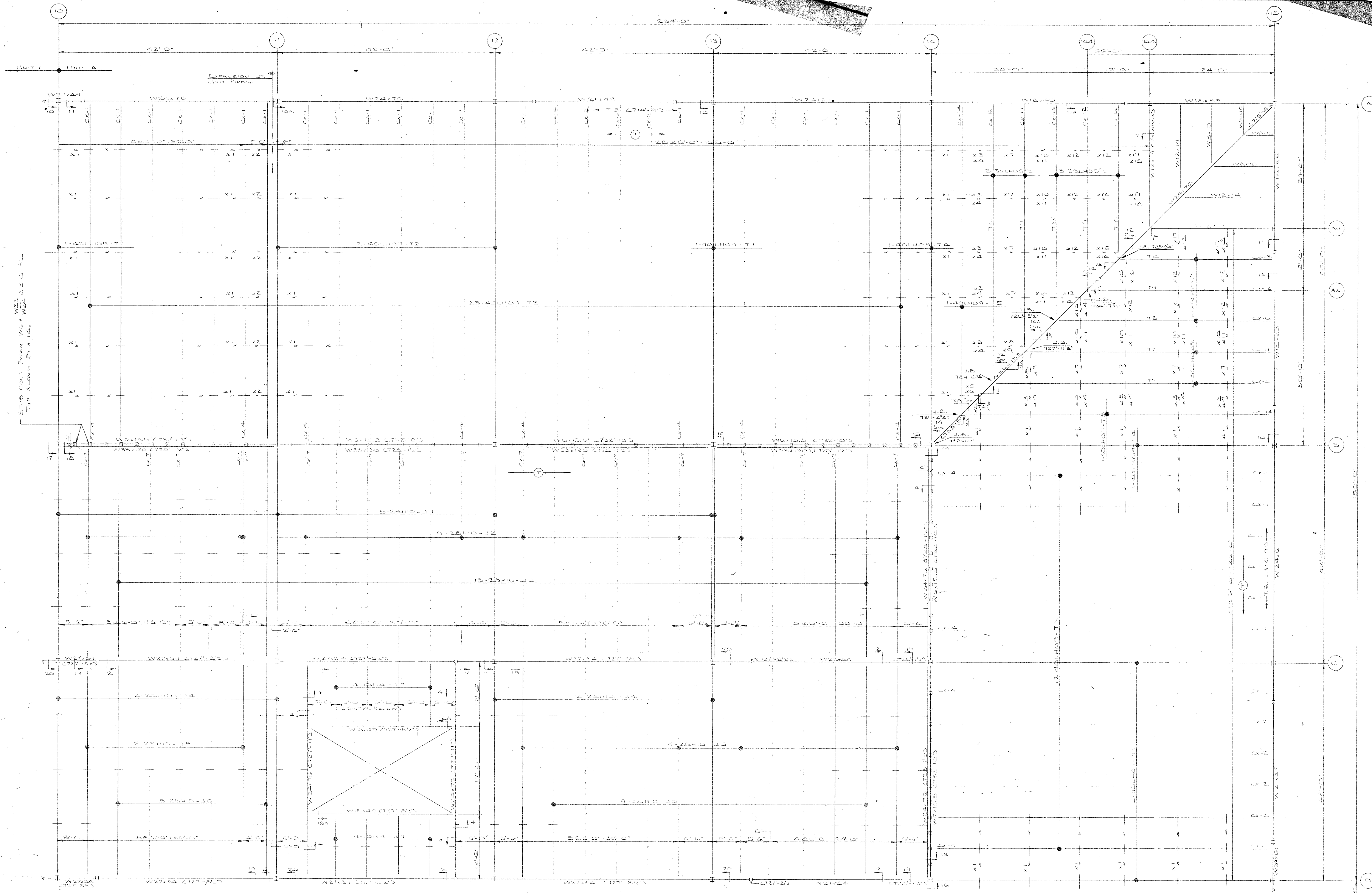


DATE	PRINTS	FOR LICHENWALD-JENNISON IRON WORKS
APR 11 1978	1	AT MORTON CROSS, ILLINOIS
APR 15 1978	2	SHIP TO J.E. SITE
APR 15 1978	3	AT BLOOMING, ILLINOIS
APR 15 1978	4	JOB: MIDDLE TOWNSHIP
APR 15 1978	5	ARCHITECT
APR 15 1978	6	REPRESENTATIVE: BUILDERS STRUCTURAL STEEL CO.

VULCRAFT	
A DIVISION OF NUCOR CORPORATION	
P.O. BOX 1000	ST. JOE, INDIANA 46785
DRAWN BY: J.E.	DATE: 10-1-77
DESIGNED BY: J.E.	DATE: 10-1-77
CHECKED BY: J.E.	DATE: 10-1-77
APPROVED BY: J.E.	DATE: 10-1-77
FILE No. 04-5-1194	DRAWING No. 01 OF 01





PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT "A"  
SCALE 1"=8'-0"

# IMPORTANT

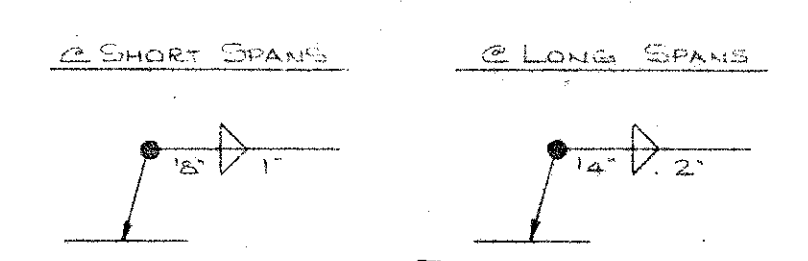
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  - DO NOT CUT AWAY ANY CHORDS OR WEBS.  
DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
  - Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

## NOTES

- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT
- PAINT—ONE SHOP COAT
- BRIDGING—1 1/2" x 1 1/2" x 1/4" PLATE HORIZONTAL
- BRIDGING—1 1/2" x 1 1/2" x 1/4" PLATE BOLTED DOWN
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

## 12. TYPICAL WELDES

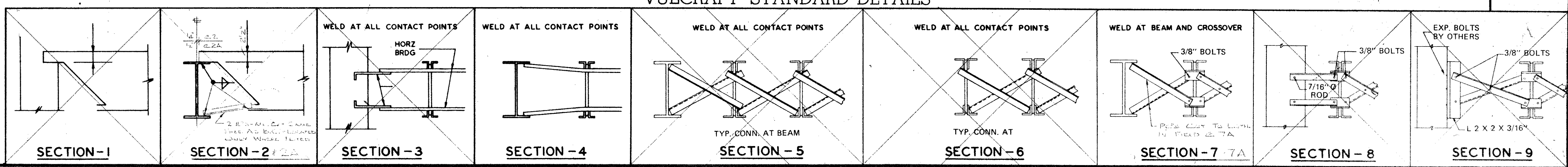


FINAL PLAN  
FOR FIELD USE  
MAY 24 1976

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DATE	PRINTS	FOR
APR 1 1976	1	FOR LICHENWALD-JOHNSON IRON WORKS, INC.
NOV 13 1975	1	AT MORTON GROVE, ILLINOIS
DEC 2 1975	1	SHIP TO JOB SITE
DEC 2 1975	1	AT AUSTON, ILLINOIS
DEC 2 1975	1	JOB: MIDDLE SCHOOL
DEC 2 1975	1	ARCHITECT
DEC 2 1975	1	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

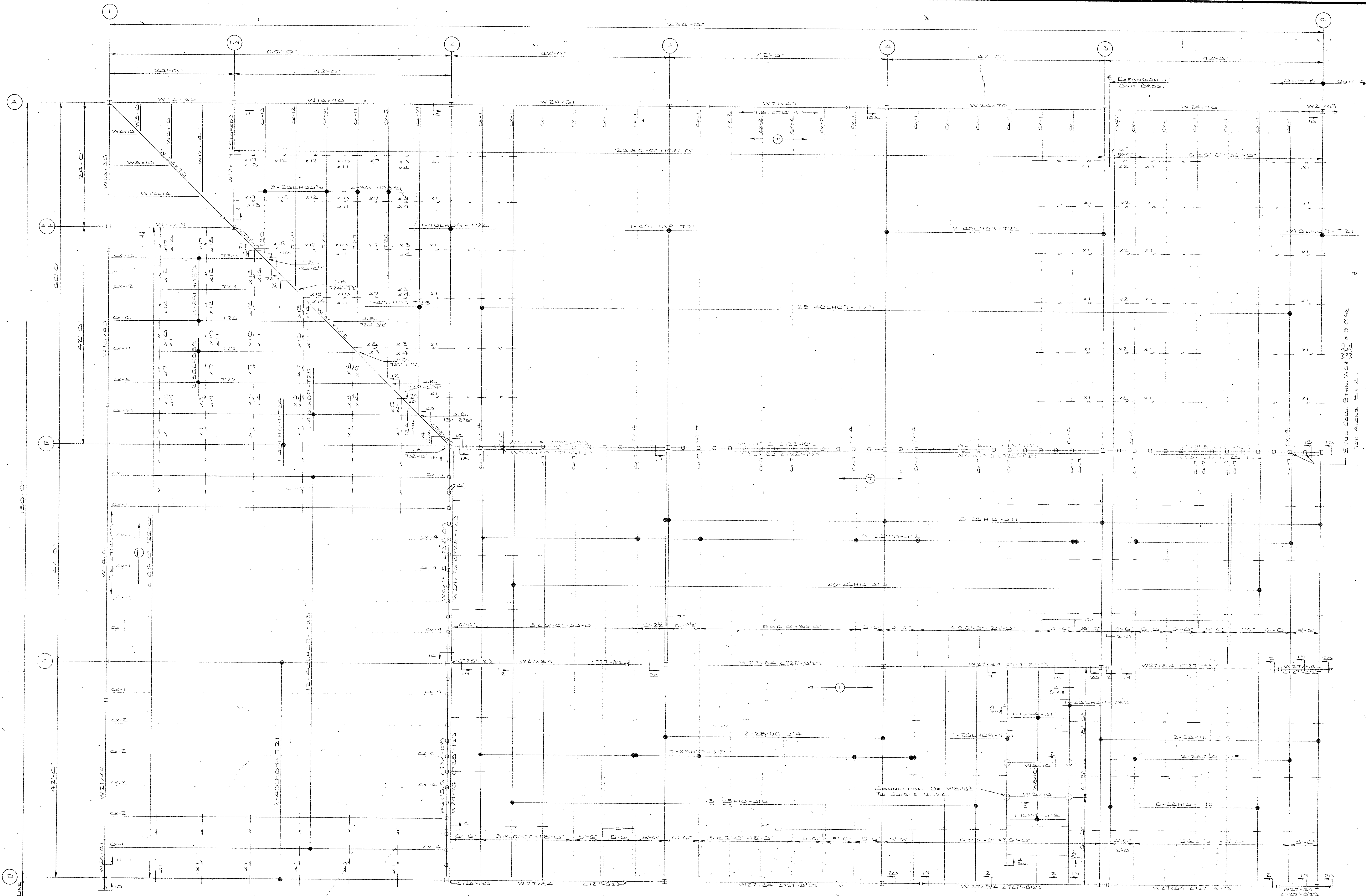
## VULCRAFT STANDARD DETAILS












# **IMPORTANT** RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
  - (2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
  - (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
**HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**  
Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.  
Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
  - (5) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - (6) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
  - (7) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
  - (8) **DO NOT CUT AWAY ANY CHORDS OR WEBS.**  
**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and to any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck, as damage will result.
  - (9) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

## **NOTES**

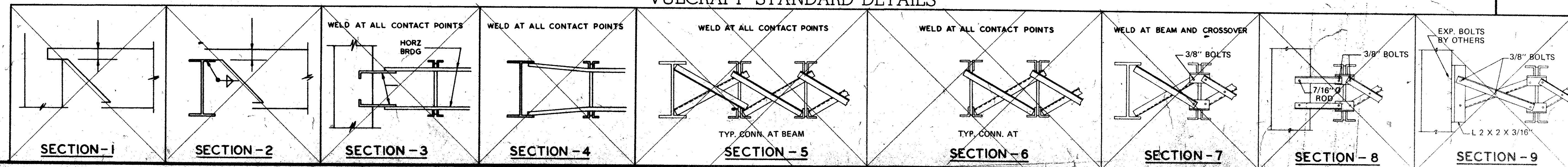
1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT RED
6. PAINT—ONE SHOP COAT
7. BRIDGING—1 1/2" x 1 1/2" x 1/8" HORIZONTAL
8. BRIDGING—1 1/2" x 1 1/2" x 1/8" BOLTED DIAG.
9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20' 0" LENGTHS STANDARD 6" LAP.

## **FINAL PLANS FOR FIELD USE** MAY 24 1976

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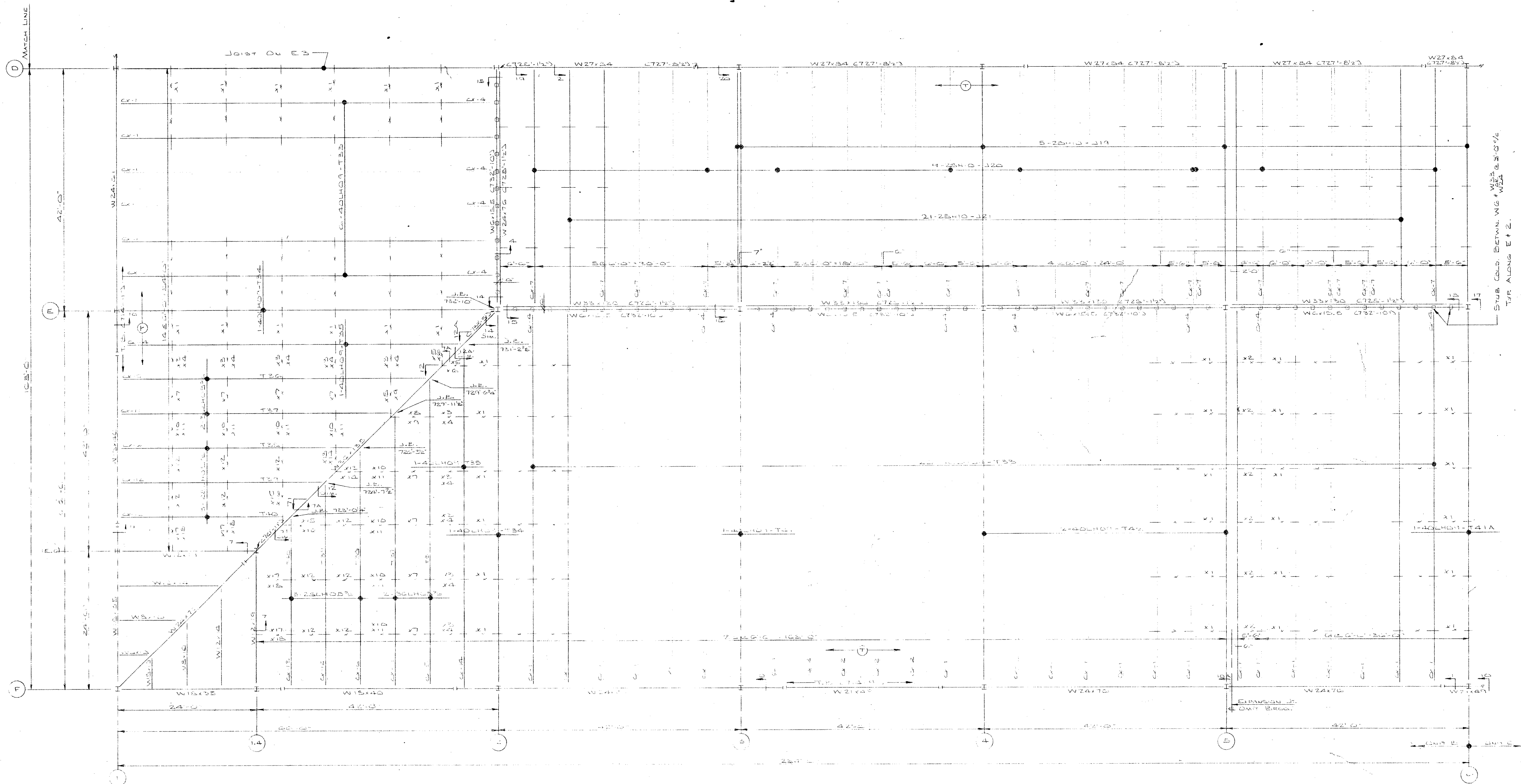
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05/24/76	1	FOR LICHTENWALD-JOHNSON, IRON WORKS CO.
06/03/76	1	AT MORTON GROVE, ILLINOIS
06/03/76	1	SHIP TO JOB SITE
06/03/76	1	AT AUBURN, ILLINOIS
06/03/76	1	JOB MIDDLE SCHOOL
06/03/76	1	ARCHITECT
06/03/76	1	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

## **VULCRAFT STANDARD DETAILS**

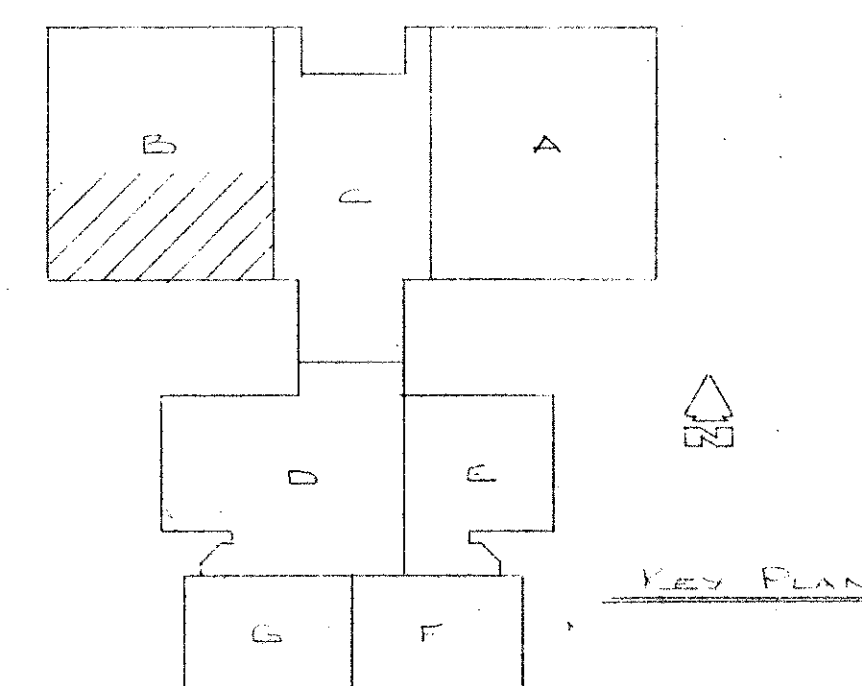


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PARTIAL JOIST FRAMING PLAN AT ROOF LEVEL  
SCALE 1/8"=1'-0"



## IMPORTANT

### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER  
CONSTRUCTION

- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.

**HOISTING CABLES FOR LONGSPAN SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 40 FEET, TWO LINES ON SPANS BETWEEN 40 FEET AND 100 FEET FOR SPANS OVER 100 FEET. ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**

Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.

Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.

**DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**

When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.

Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.

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**VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**

**DO NOT CUT AWAY ANY CHORDS OR WEBS.**

**DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Jack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.

Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.

Do not dump or throw joists off or truck, as damage will result.

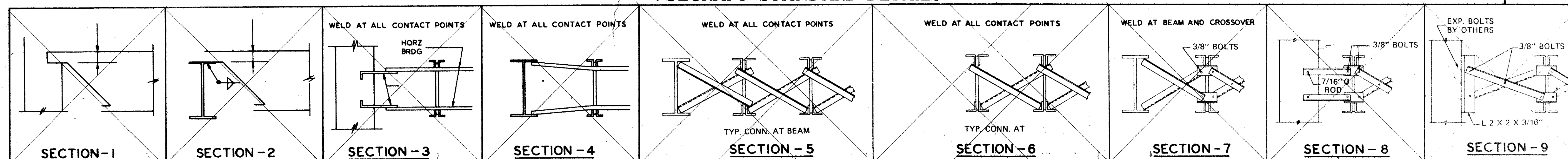
Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

**NECESSARY.**

## NOTES

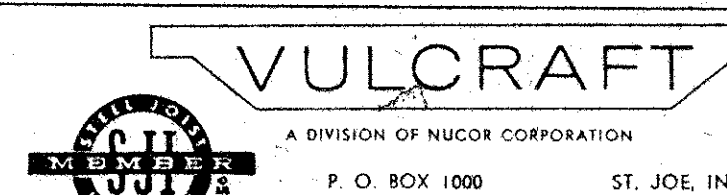
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- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT — WED
- PAINT—ONE SHOP COAT
- BRIDGING—L1 1/2" X 5" HORIZONTAL
- BRIDGING—L1 1/2" X 5" BOSS DIAG
- PLACE TAGGED END OF JOIST WHERE INDICATED THIS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

## VULCRAFT STANDARD DETAILS



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DATE	PRINTS	FOR LUTHERWALD-JOHNSON, 1800 WOOD ST.
APR 1975	ALL	AT MORTON GROVE, ILLINOIS
NOV 1975	APP	SHIP TO JOE SITE
	APP	AT AURORA, ILLINOIS
	FIN	JOB WHOLE SCHOOL
	FIN	ARCHITECT
		REPRESENTATIVE FOLDERS STRUCTURAL STEEL CO.



ST. JOE, INDIANA 46785

DATE: 10-10-75

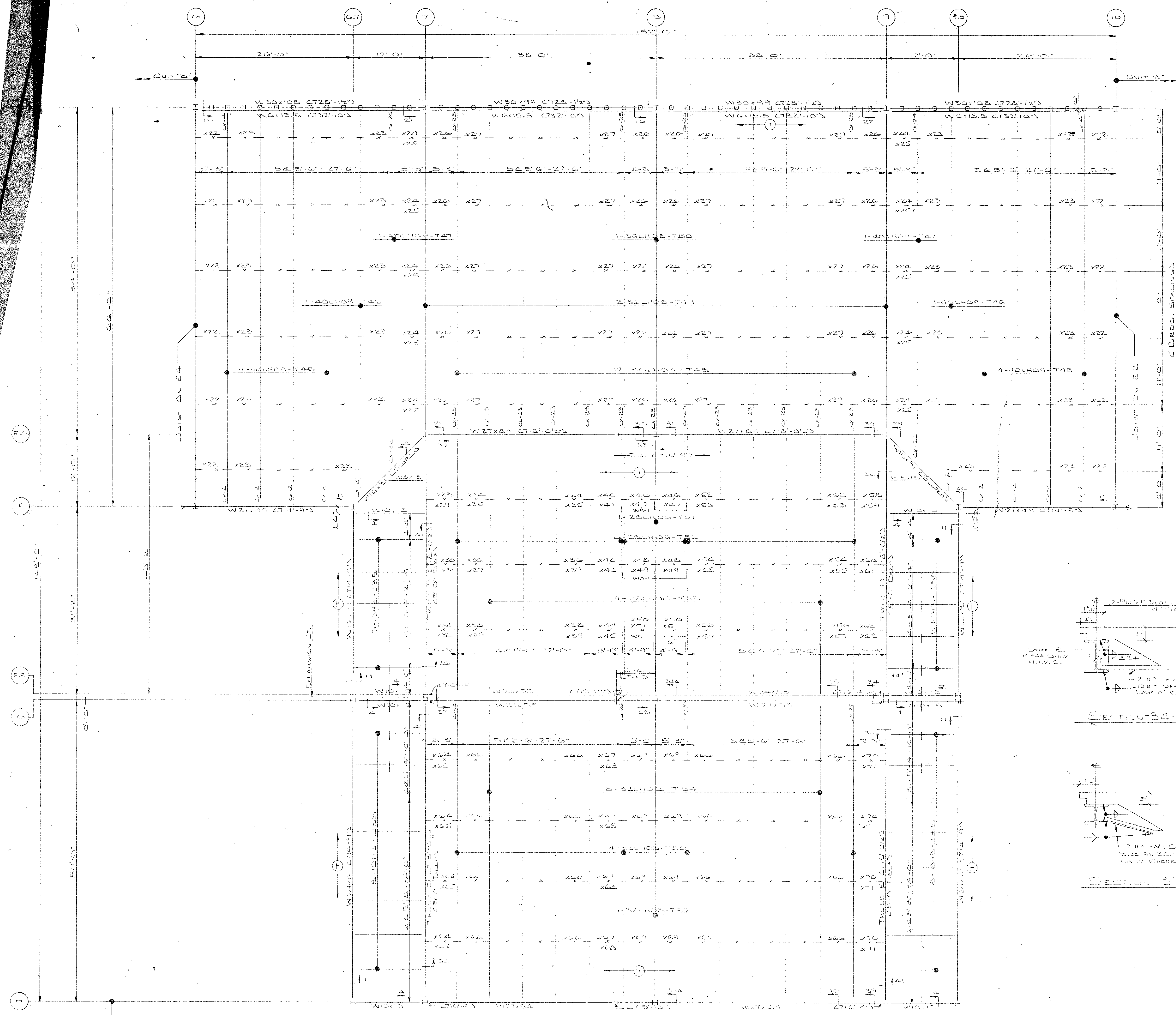
REVISIONS

FILE No. 32-51194 DRAWING No. 24

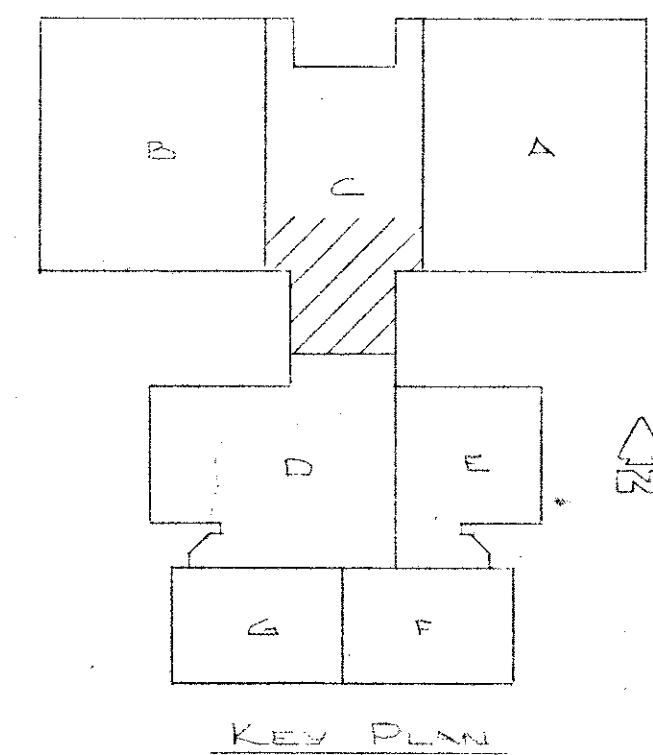




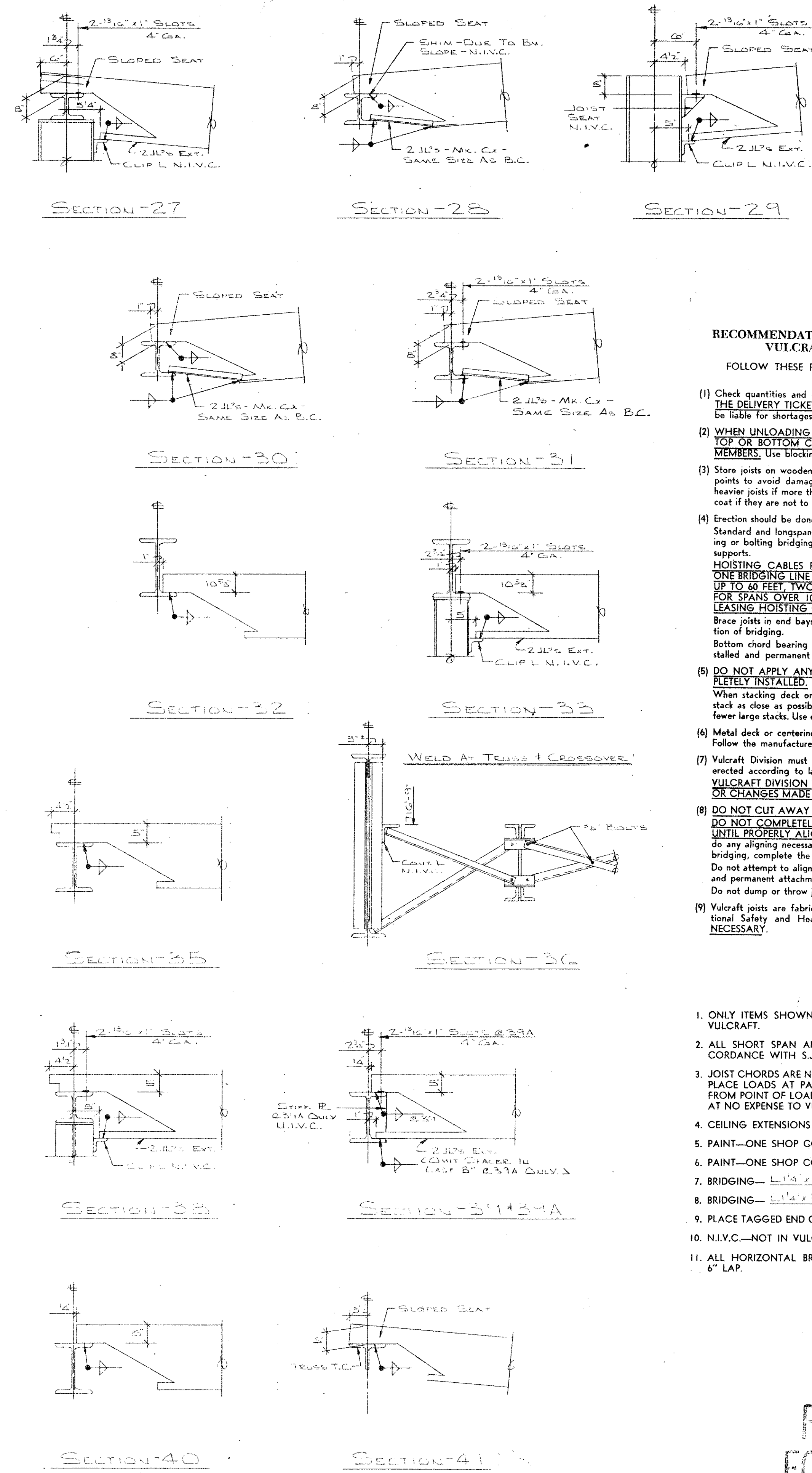




PARTIAL JOIST FRAMING PLAN AT ROOF LEVEL UNIT 'C'  
SCALE: 1/8" = 1'-0"



KEY PLAN



### IMPORTANT

#### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

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### NOTES

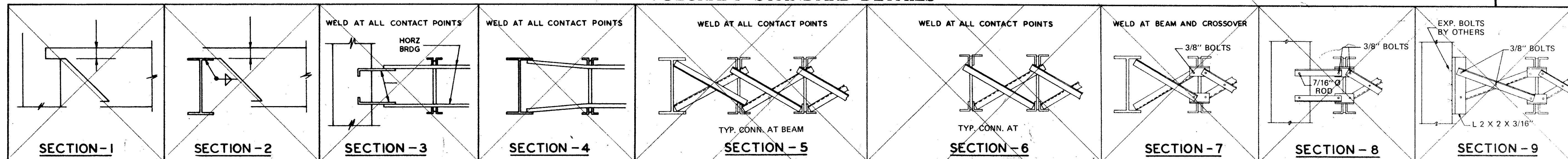
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- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER, PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAIN—ONE SHOP COAT
- PAIN—ONE SHOP COAT
- BRIDGING—EITHER 2" DIA. HORIZONTAL OR 2" DIA. VERTICAL BOLTED DIAPHRAGMS.
- PLACE TAGGED END OF JOIST WHERE INDICATED THIS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLAN  
FOR FIELD USE

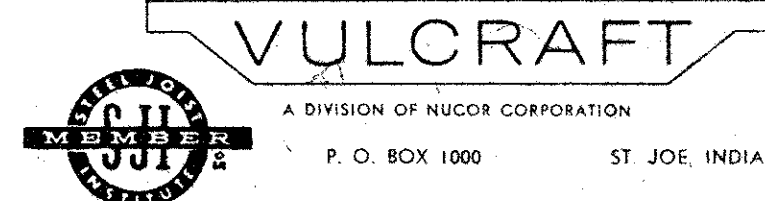
MAY 24 1976

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DATE	PRINTS	FOR
APR 1976	1	AT MORTON GRAVE, ILLINOIS
MAY 1976	2	SHIP TO JOB SITE
JUN 1976	3	AT ABERGASTHANS
JUL 1976	4	JOB MIDDLE SCHOOL
AUG 1976	5	ARCHITECT
SEP 1976	6	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.
OCT 1976	7	
NOV 1976	8	
DEC 1976	9	
JAN 1977	10	
FEB 1977	11	
MAR 1977	12	
APR 1977	13	
MAY 1977	14	
JUN 1977	15	
JUL 1977	16	
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FEB 1979	35	
MAR 1979	36	
APR 1979	37	
MAY 1979	38	
JUN 1979	39	
JUL 1979	40	
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SEP 1979	42	
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NOV 1979	44	
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### VULCRAFT STANDARD DETAILS



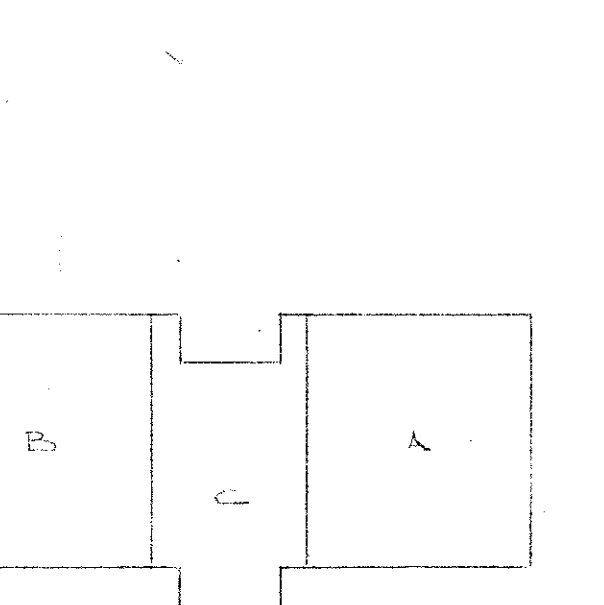
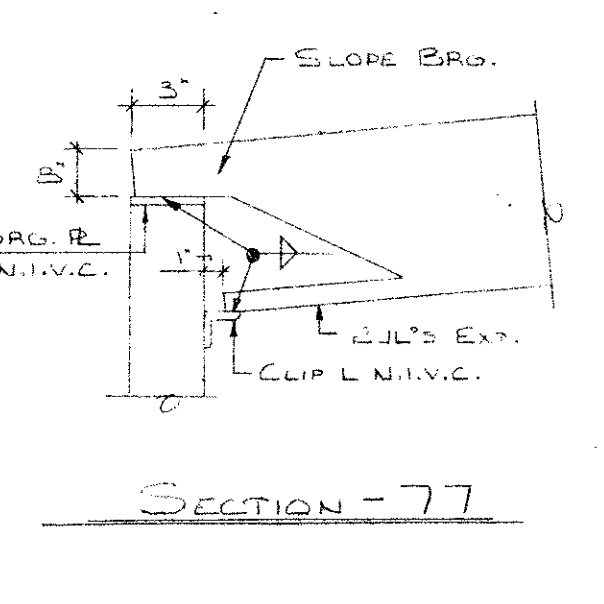
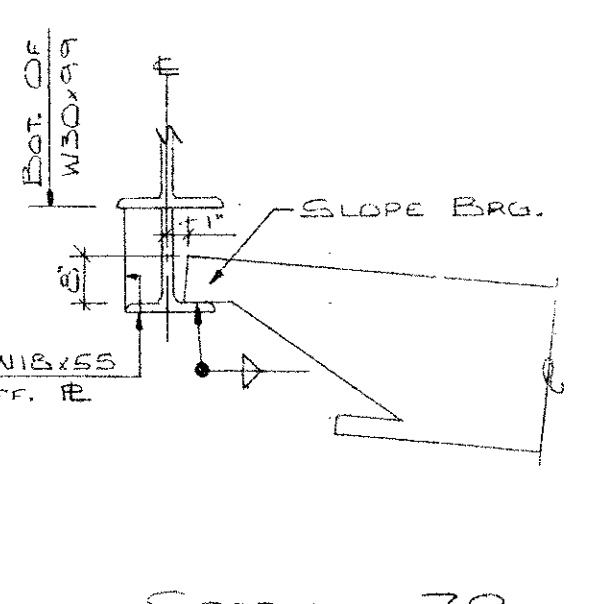
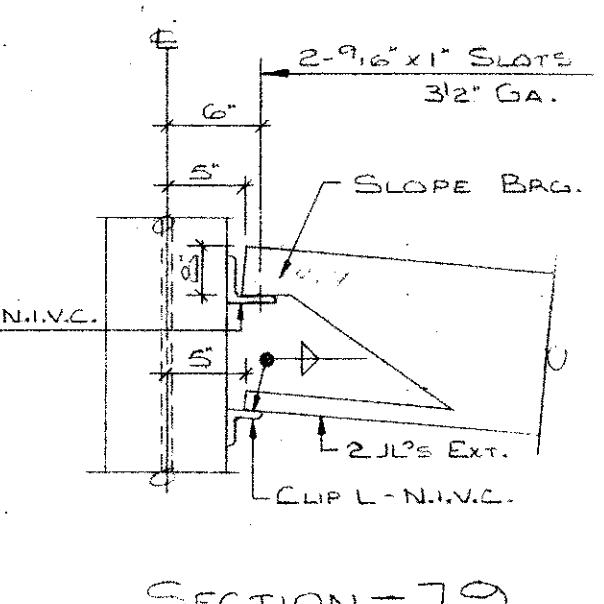
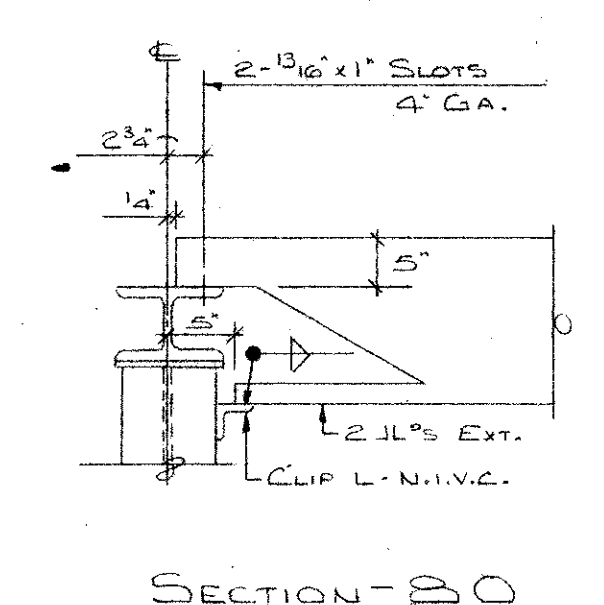
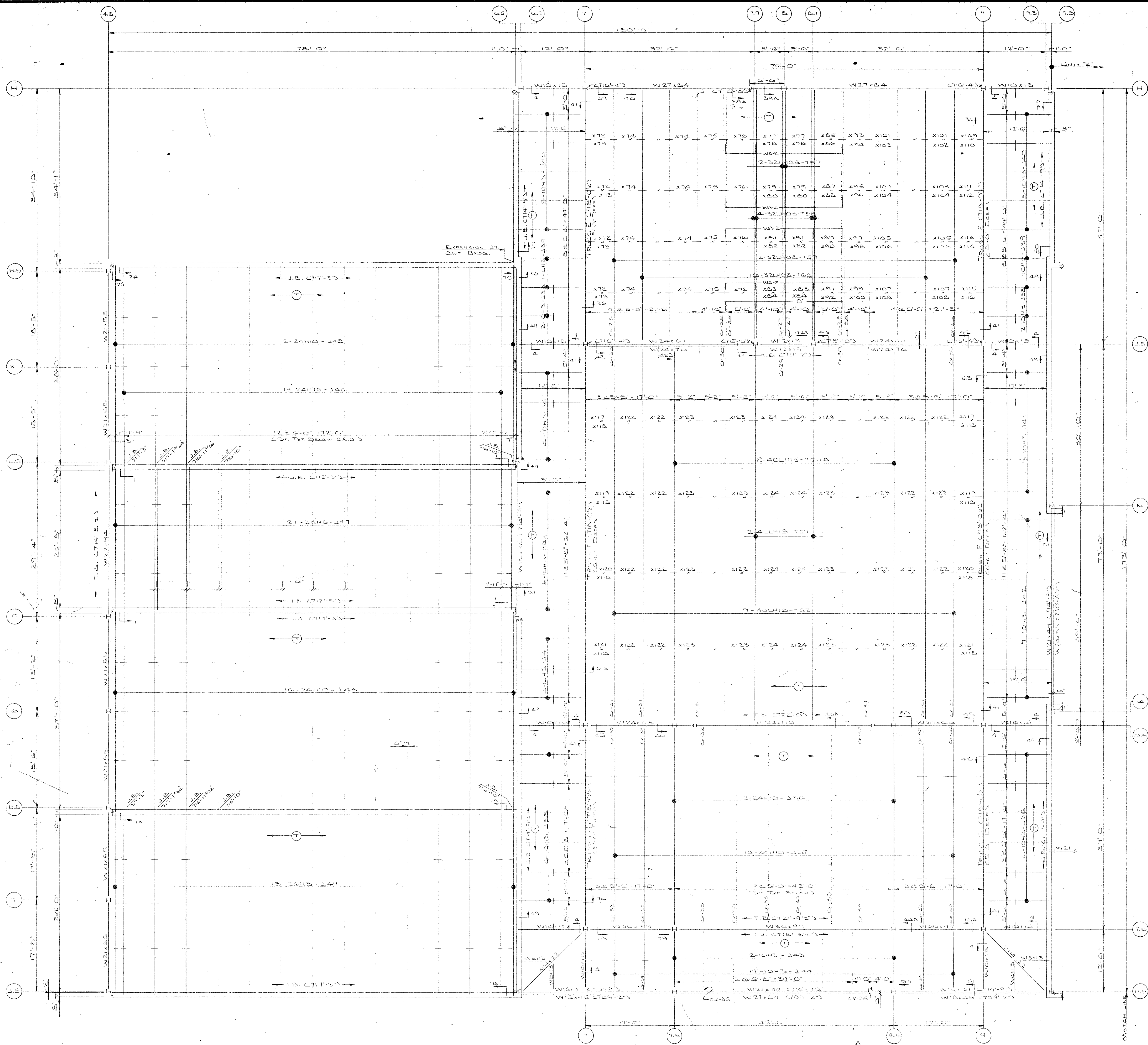
A DIVISION OF HUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

DRAWN BY: ARW DATE: 10/76 OKD BY: DPH DATE: 10/76

REVISIONS: 1. DATE: 10/76

FILE No. 02-5-1194 DRAWING No. 100 OF 1





# IMPORTANT

## RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- (2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS. PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- (5) **HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.** Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
- (6) Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- (7) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.** When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- (8) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- (9) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to listed plans.
- (10) **VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
- (11) **DO NOT CUT AWAY ANY CHORDS OR WEBS.** **DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck as damage will result.
- (12) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

## NOTES

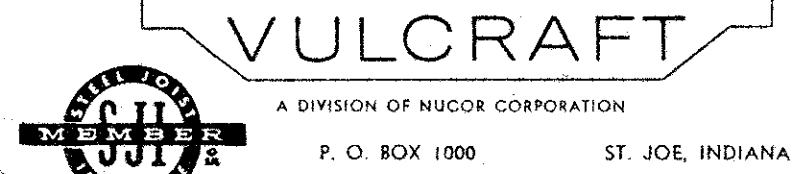
1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT RED
6. PAINT—ONE SHOP COAT
7. BRIDGING—L 1/2" x 1/2" x 1/2" HORIZONTAL
8. BRIDGING—L 1/2" x 1/2" x 1/2" BOLTED DIAGONAL
9. PLACE TAGGED END OF JOIST WHERE INDICATED THIS T
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20' 0" LENGTHS STANDARD 6" LAP.

FINAL PLANS FOR FIELD USE

MAY 24 1976

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DATE	PRINTS	FOR LUTHERNVALE-JOHNSTON IRON WORKS CO.
11/1	1	AT MARTIN GROVE, ILLINOIS
11/1	2	SHIP TO JOB SITE
11/1	3	AT MARTIN GROVE, ILLINOIS
11/1	4	JOB MIDDLE SCHOOL
		ARCHITECT
		REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

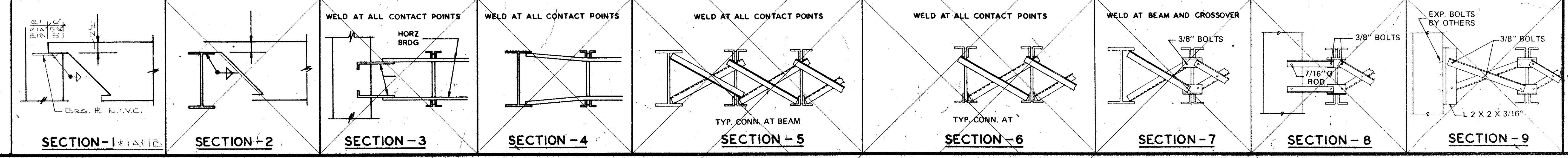


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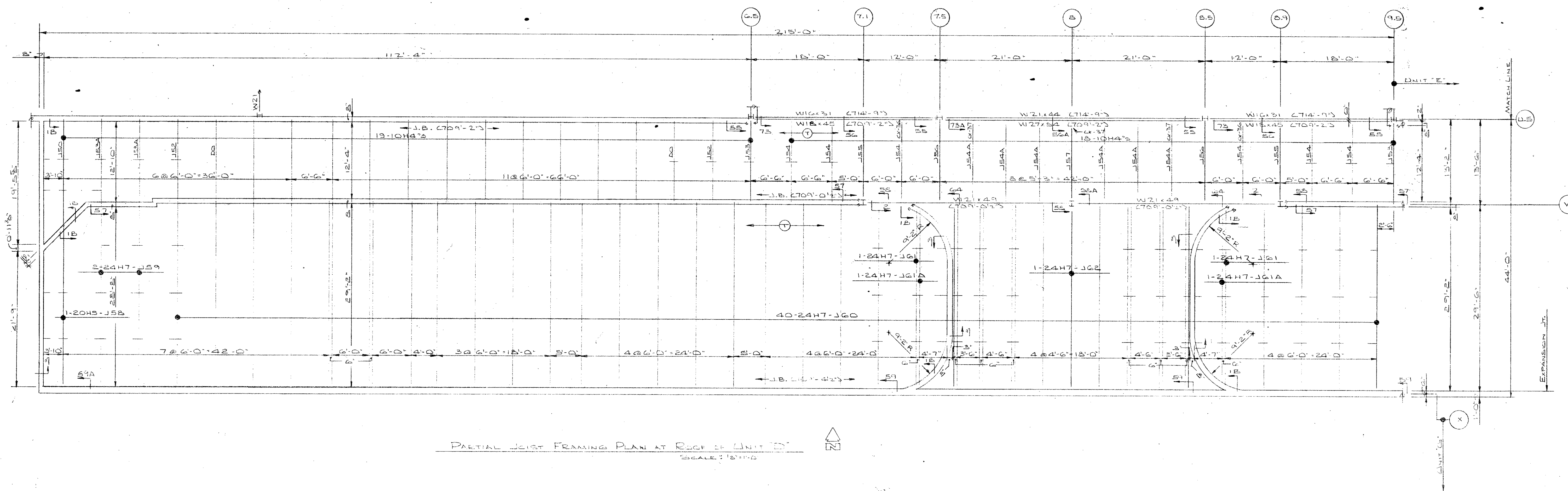
REVISIONS

FILE No. 02-5-1194 DRAWING No. 127 OF 11

## VULCRAFT STANDARD DETAILS







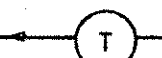
## IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS  
CONSTRUCTION

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER

- Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
- WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.  
HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPAN. UP TO 60 FEET TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.  
Bottom chord bearing joints shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.  
When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.  
VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- DO NOT CUT AWAY ANY CHORDS OR WEBS.  
DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Fast weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.  
Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.  
Do not dump or throw joists off of truck as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

## NOTES

- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT RED
- PAINT—ONE SHOP COAT
- BRIDGING—L14x14x8 HORIZONTAL
- BRIDGING—
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

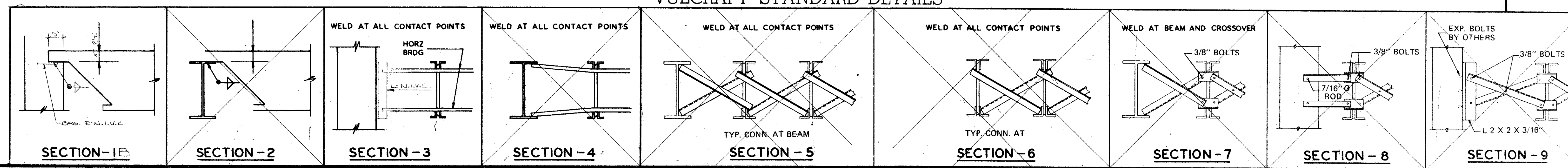
FINAL PLAN  
FOR FIELD USE

MAY 24 1975

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DATE	PRINTS	FOR
APR 1975	1	AT MORTON GROVE, ILLINOIS
APR 1975	1	SHIP TO JOB SITE
APR 1975	1	AT AUSTIN, ILLINOIS
APR 1975	1	JOB: MIDDLE SCHOOL
APR 1975	1	ARCHITECT
APR 1975	1	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

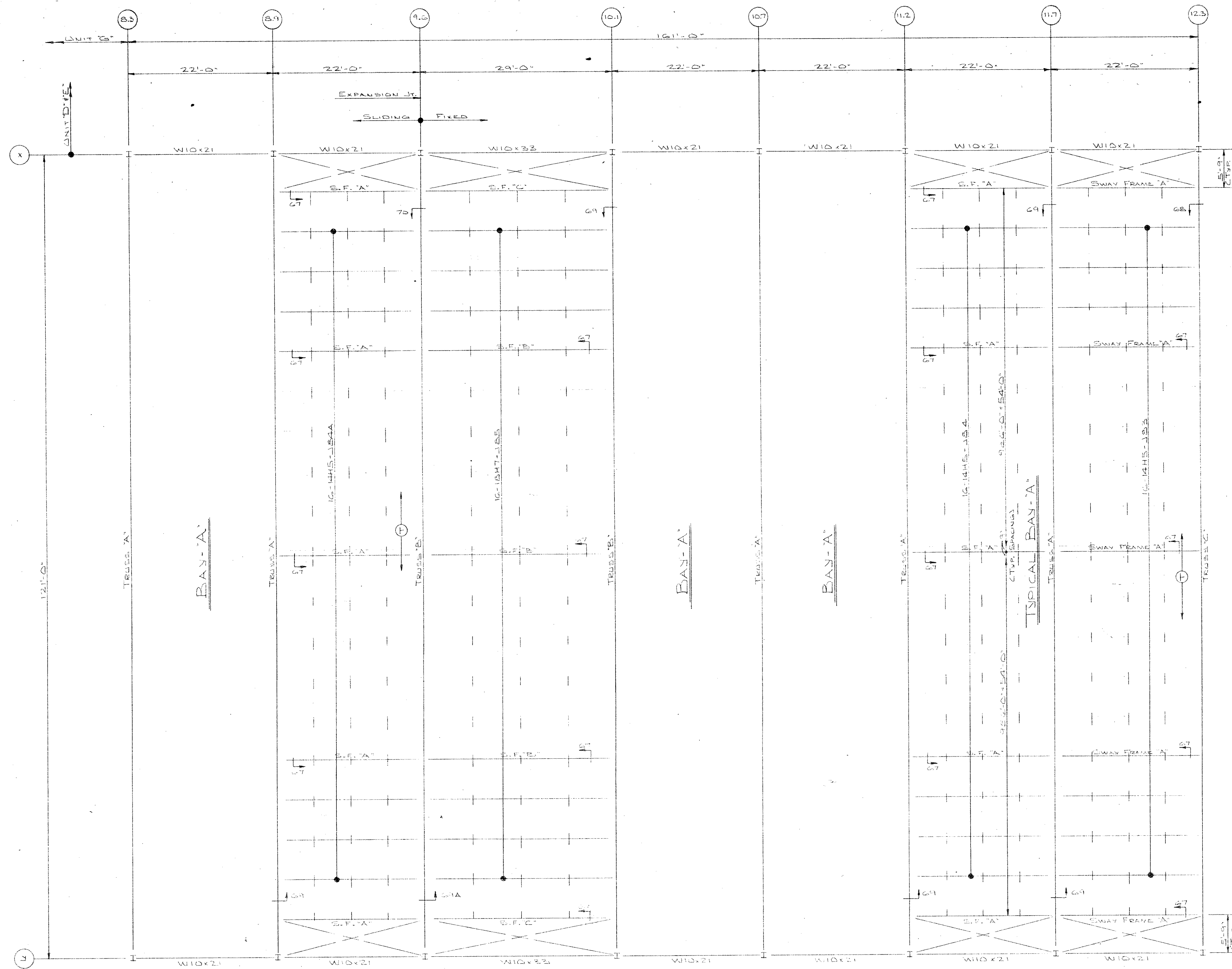
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A DIVISION OF NUCOR CORPORATION	
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DESIGNED BY: AEM	DATE: 10-10-75
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APPROVED BY: AEM	DATE: 10-10-75
FILE No. 02-5-1194	DRAWING No. E33 OF 3



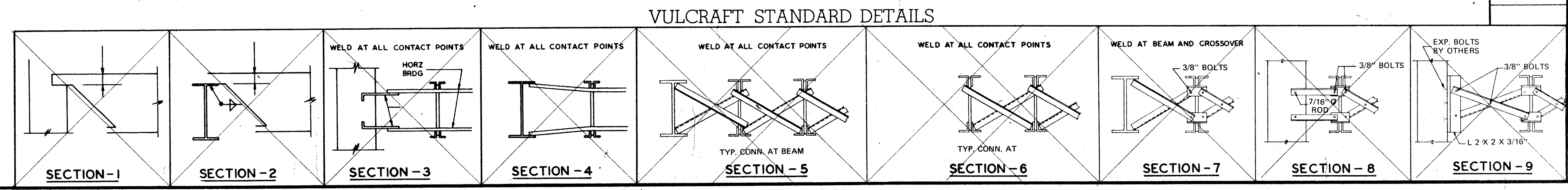
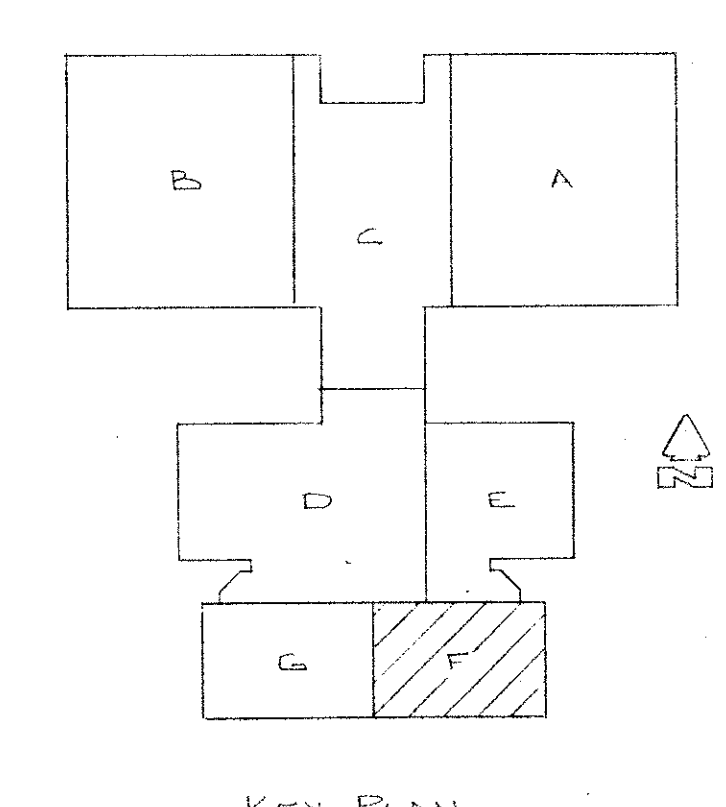
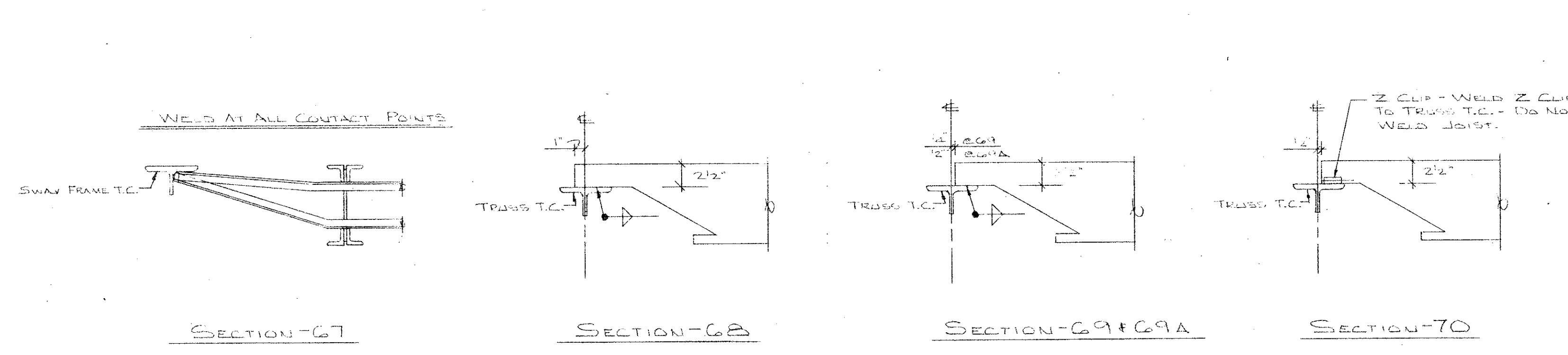








JOIST FRAMING PLAN AT ROOF OF UNIT 'F'  
SCALE: 1/8" = 1'-0"



### IMPORTANT

RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
- (2) WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- (4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- (5) HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET, TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET FOR SPANS OVER 100 FEET. ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
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- (7) DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
- (8) When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
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- (11) VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- (12) DO NOT CUT AWAY ANY CHORDS OR WEBS.
- (13) DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.
- (14) Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.
- (15) Do not dump or throw joists off of truck, as damage will result.
- (16) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

### NOTES

1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
2. ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT — GRAY
6. PAINT—ONE SHOP COAT
7. BRIDGING— 1 1/2" x 1 1/2" x 1/8" HORIZONTAL
8. BRIDGING—
9. PLACE TAGGED END OF JOIST WHERE INDICATED THIS
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLAN  
FOR FIELD USE  
MAY 24 1976

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DATE	PRINTS	FOR
	1	FOR LIGHTENWALD-JOHNSON 190N WORKS CO.
	1	AT MORTON GROVE, ILLINOIS
	1	SHIP TO JOB SITE
	1	AT AUBURN, ILLINOIS
	1	JOB MIDDLE SCHOOL
	1	ARCHITECT
	1	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

VULCRAFT  
A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

DRAWN BY: A.C.W. DATE: 10-10-75 CKD BY: J.M. DATE: 10-17-75

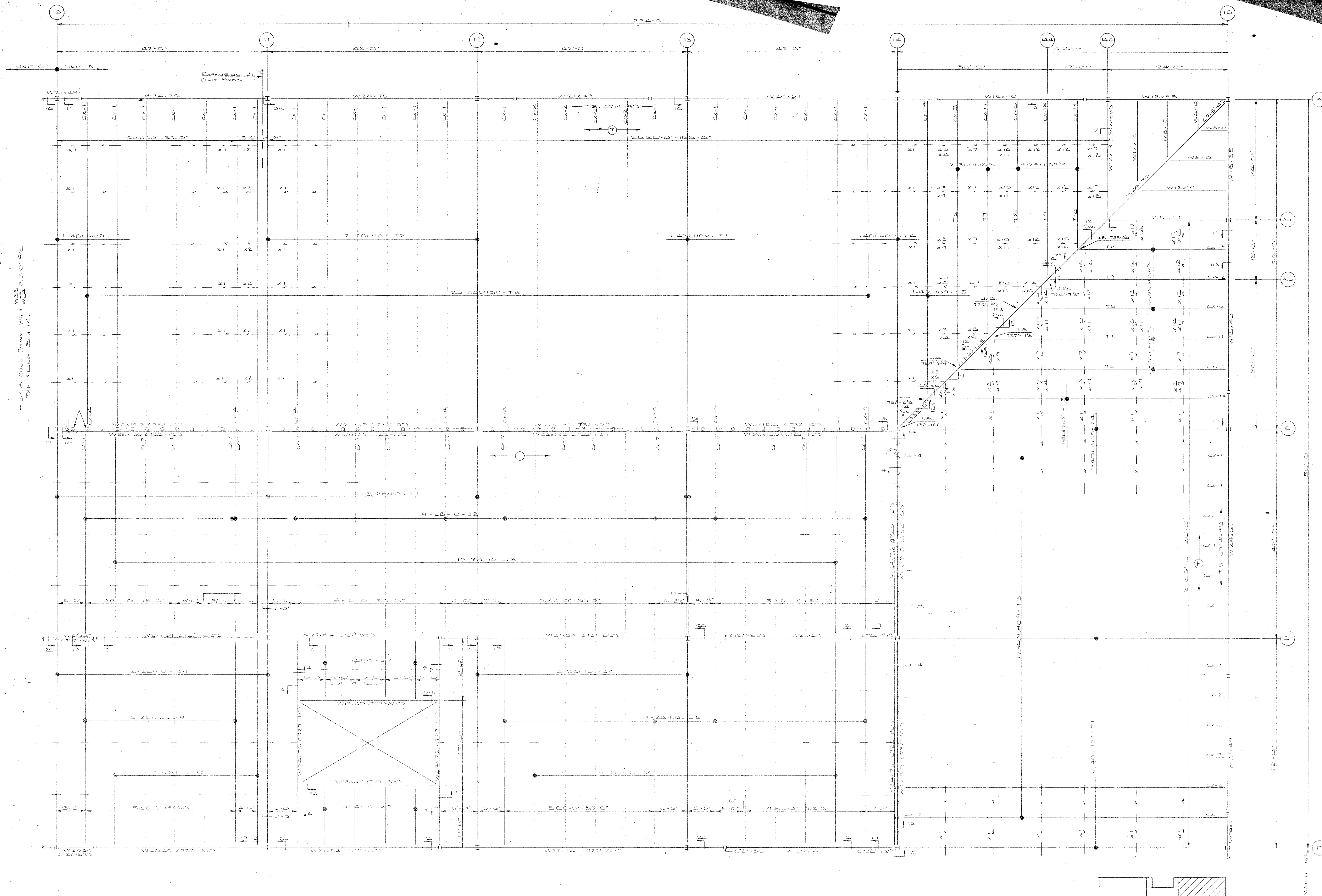
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FILE No. 02-5-1194 DRAWING No. E10 OF 11







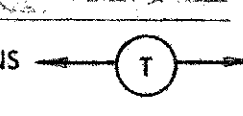
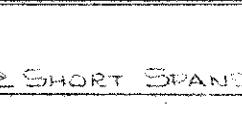
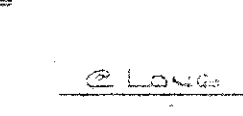


PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT "A"  
SCALE: 1/8" = 1'-0"

**IMPORTANT**  
RECOMMENDATIONS FOR HANDLING AND ERECTING  
VULCRAFT OPEN WEB STEEL JOISTS

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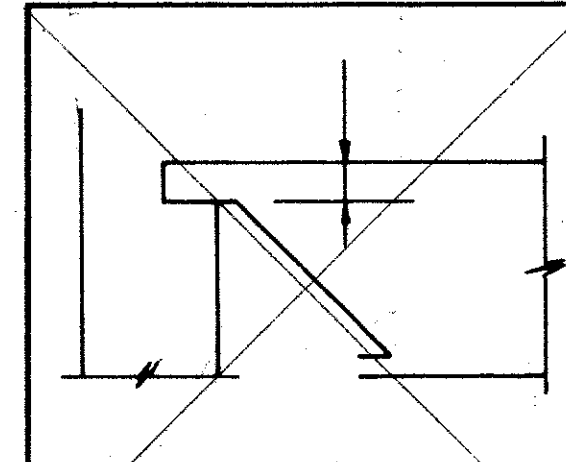
- NOTES**
1. ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
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  4. CEILING EXTENSIONS ARE NOT FURNISHED.
  5. PAINT—ONE SHOP COAT RED
  6. PAINT—ONE SHOP COAT
  7. BRIDGING—2" x 12" x 1/2" HORIZONTAL
  8. BRIDGING—2" x 12" x 1/2" BOLTED DIAGONAL
  9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
  10. N.Y.C.—NOT IN VULCRAFT'S CONTRACT.
  11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.
  12. TYPICAL WELDS:  
 SHORT SPAN  
 LONG SPAN

**FINAL PLANS FOR FIELD USE**  
MAY 2 1976

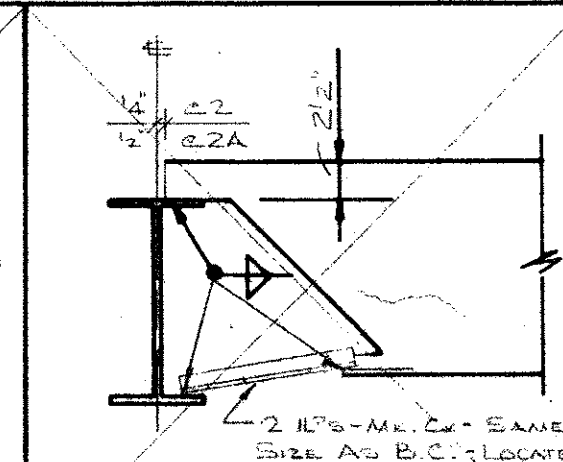
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DATE	PRINTS	FOR
APR 1 1975	1	FOR LICHENWALD-JOHNSON IRON WORKS CO.
NOV 1 1975	2	AT MORTON GROVE, ILLINOIS
NOV 1 1975	3	SHIP TO JOB SITE
NOV 1 1975	4	AT AUBURN, ILLINOIS
NOV 1 1975	5	JOB: MIDDLE SCHOOL
NOV 1 1975	6	ARCHITECT
NOV 1 1975	7	REPRESENTATIVE BUILDERS STRUCTURAL STEEL CO.

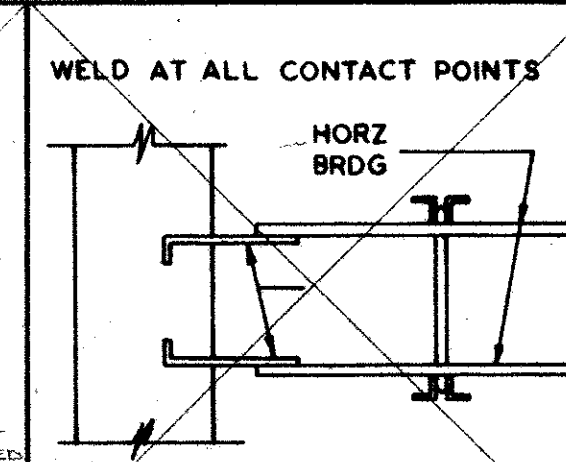
**VULCRAFT STANDARD DETAILS**



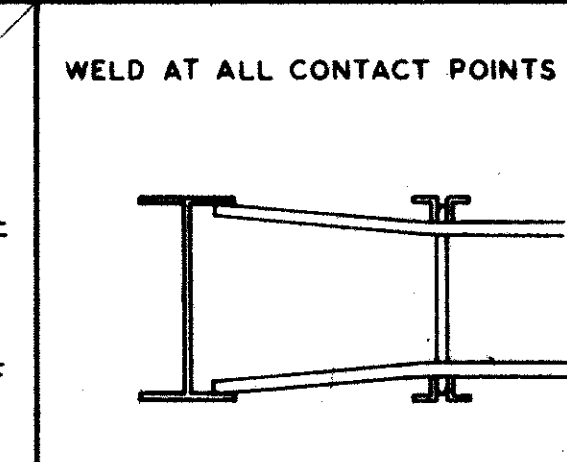
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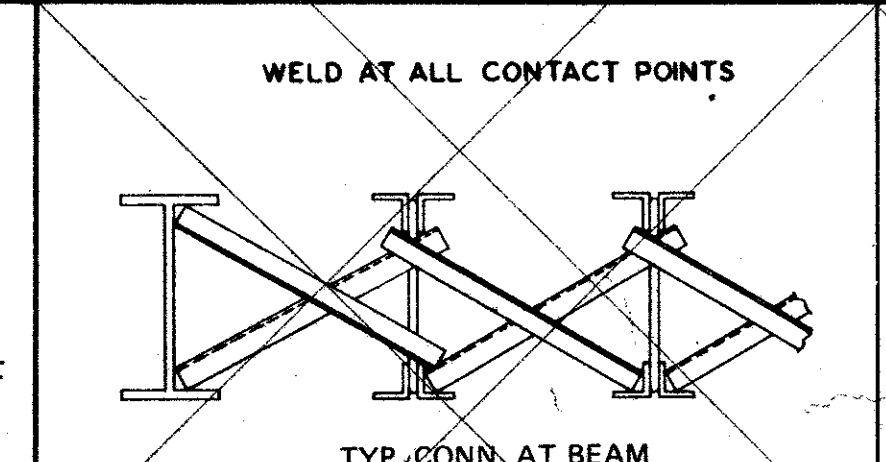
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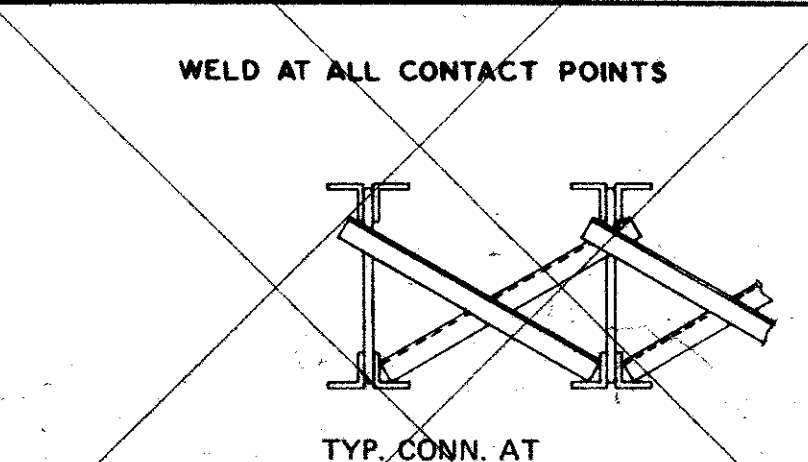
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WELD AT ALL CONTACT POINTS  
HORIZ BRDG



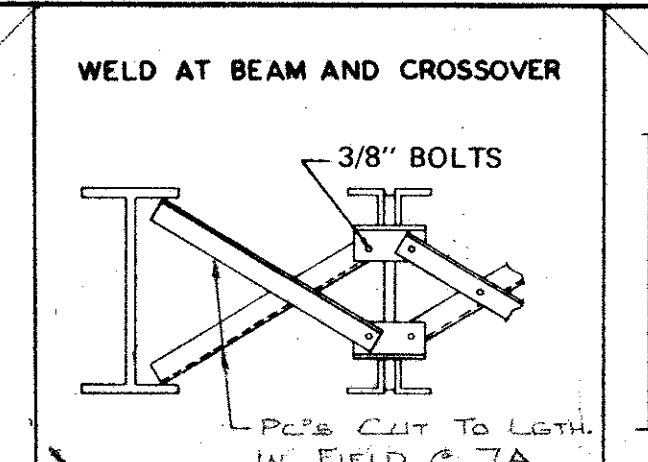
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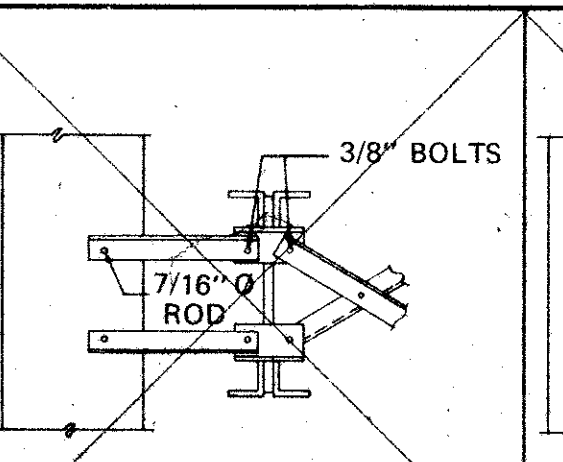
SECTION-5  
WELD AT ALL CONTACT POINTS  
TYP. CONN. AT BEAM



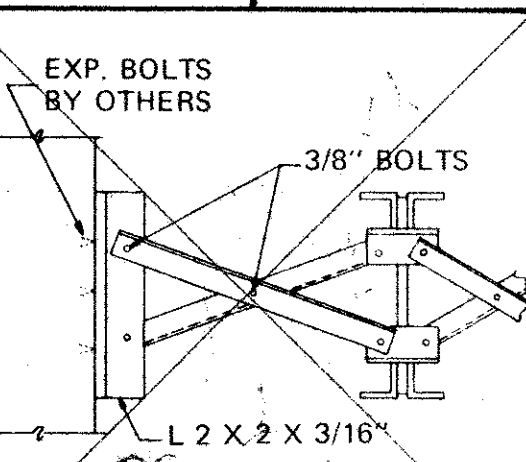
SECTION-6  
WELD AT ALL CONTACT POINTS  
TYP. CONN. AT



SECTION-7 7A  
WELD AT BEAM AND CROSSOVER  
3/8" BOLTS  
P.C.'S CUT TO LENGTH IN FIELD 2 7A



SECTION-8  
WELD AT BEAM AND CROSSOVER  
3/8" BOLTS  
7/16" ROD



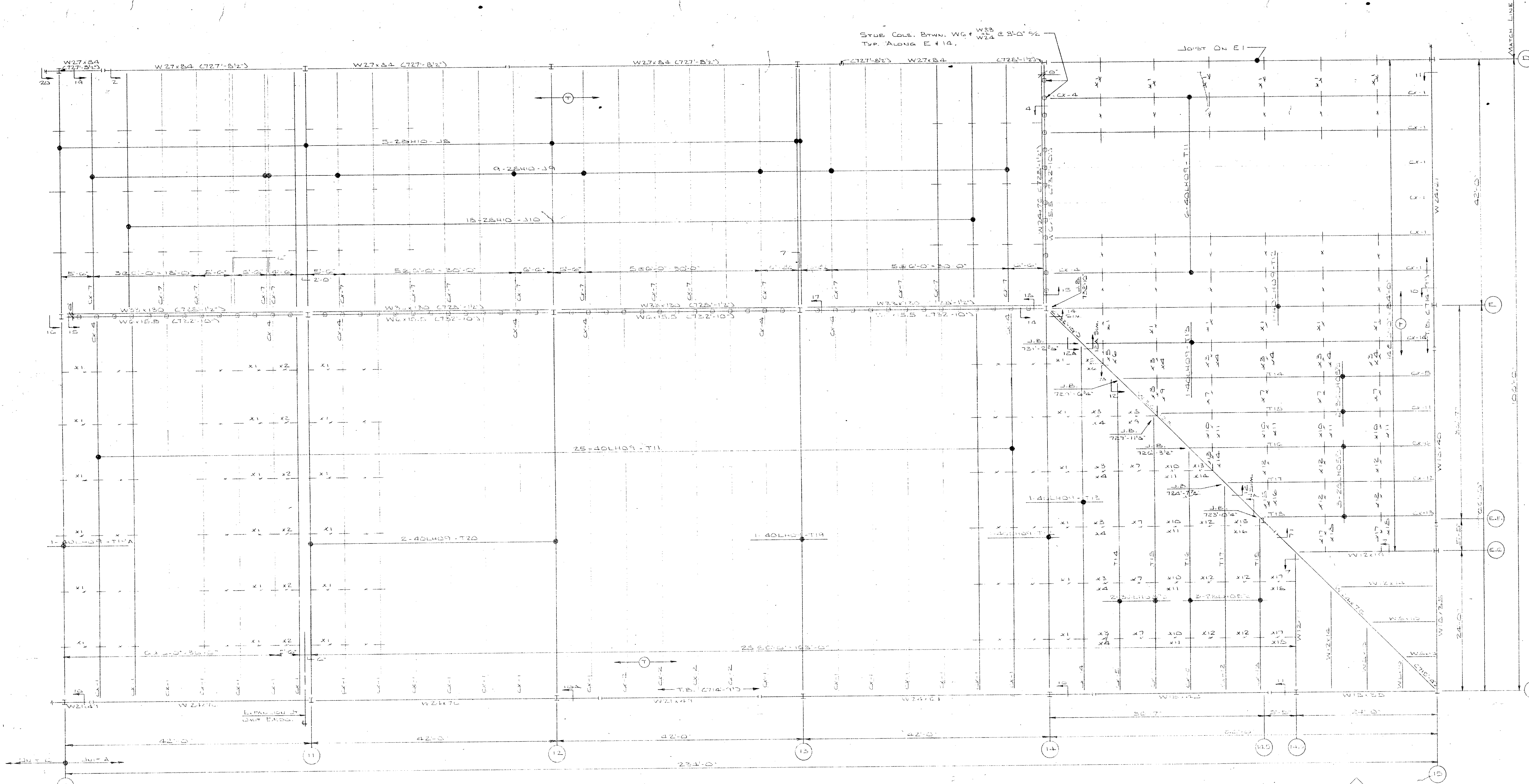
SECTION-9  
EXP. BOLTS BY OTHERS  
3/8" BOLTS  
L 2 X 2 X 3/16"

**VULCRAFT**  
A DIVISION OF NUCOR CORPORATION  
P. O. BOX 1000 ST. JOE, INDIANA 46785

DRAWN BY: ARN DATE: 4/1/75 CKB BY: DYN DATE: 4/1/75

FILE No. 02-5-1134 DRAWING No. 51 OF 1

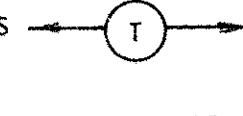




### IMPORTANT RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- 1) Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- 2) **WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joists.
- 3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- 4) Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- 5) **HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEARLY MID SPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.**
- 6) Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
- 7) **DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.**
- 8) When standing deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- 9) Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- 10) Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.
- 11) **VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.**
- 12) **DO NOT CUT AWAY ANY CHORDS OR WEBS.**
- 13) **DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED.** Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.
- 14) Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.
- 15) Do not dump or throw joists off of truck, as damage will result.
- 16) Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. **FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.**

### NOTES

- ONLY ITEMS SHOWN ON BILLS OF MATERIALS TO BE FURNISHED BY VULCRAFT.
- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
- JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT RED
- PAINT—ONE SHOP COAT
- BRIDGING—1 1/2" X 3/8" HORIZ.
- BRIDGING—1 1/2" X 3/8" HORIZ. & VERT.
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS 
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20' 0" LENGTHS STANDARD 6" LAP.

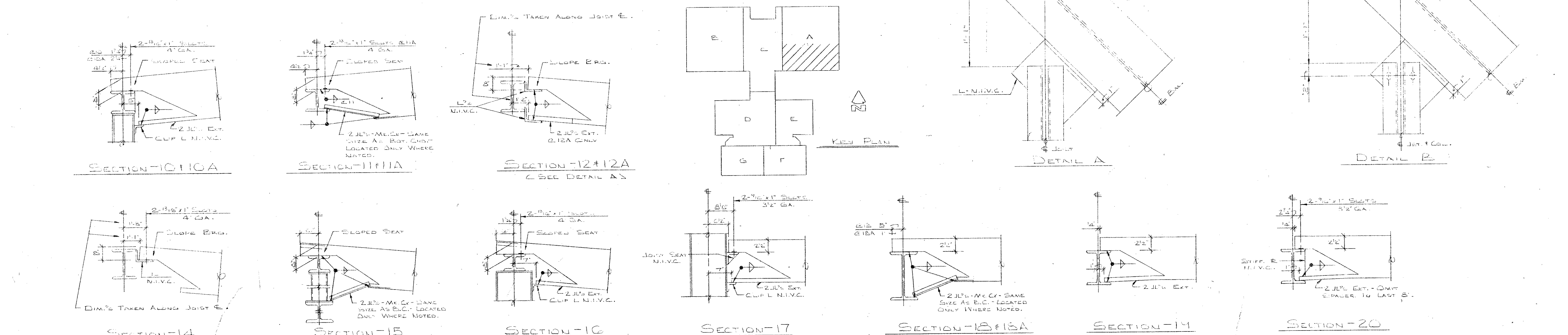
### FINAL PLANS FOR FIELD USE

MAY 24 1976

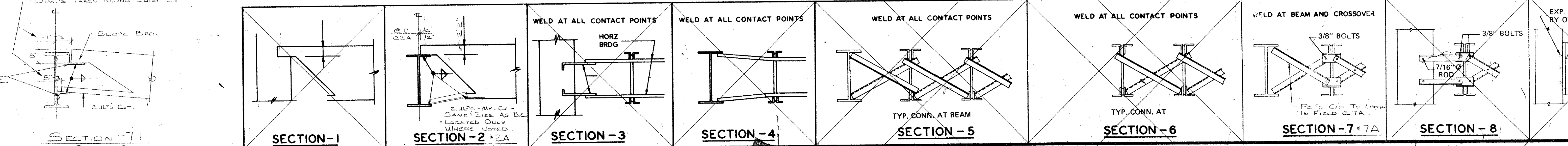
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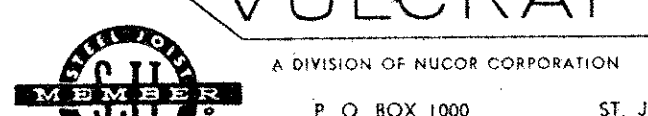
DATE	PRINTS	FOR
OCT 1976	EL	AT MORTON GROVE, ILLINOIS
	AF	SHIP TO JOB SITE
	AD	AT ALBANY, ILLINOIS
	EN	JOB: MIDDLE SCHOOL
	EN	ARCHITECT
	EN	REPRESENTATIVE BOLDEN STRUCTURAL STEEL CO.

PARTIAL JOIST FRAMING PLAN AT ROOF OF UNIT 'A'  
SCALE: 3/4"=1'-0"



### VULCRAFT STANDARD DETAILS



 <p>A DIVISION OF NUCOR CORPORATION P. O. BOX 1000 ST. JOE, INDIANA 46781</p>	
DRAWN BY <u>ARW</u> DATE <u>10-1-76</u> EXD BY <u>DM</u> DATE <u>10-1-76</u>	REVISIONS No. _____ DATE _____
FILE No. <u>02-5-1194</u> DRAWING No. <u>EL 0</u>	

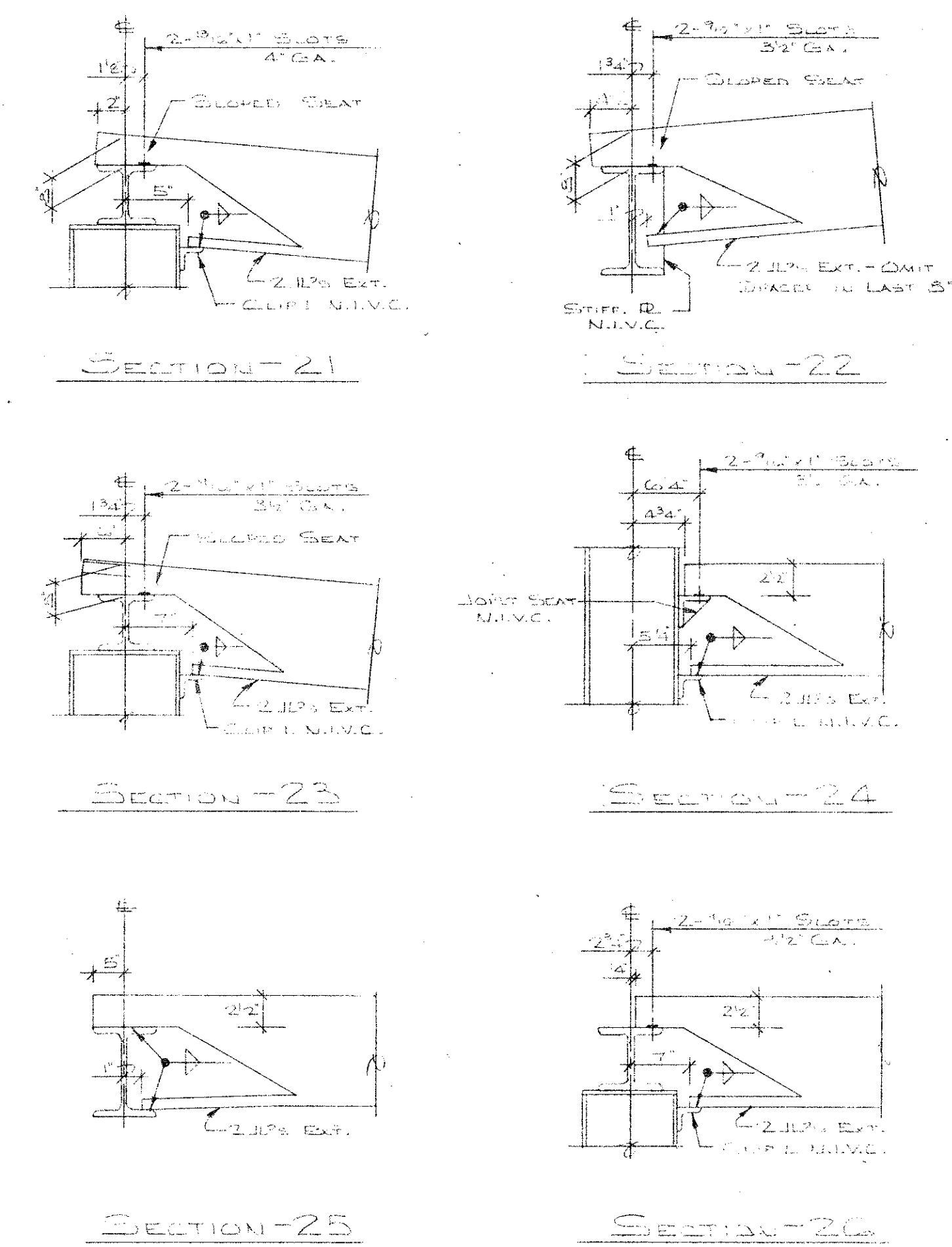
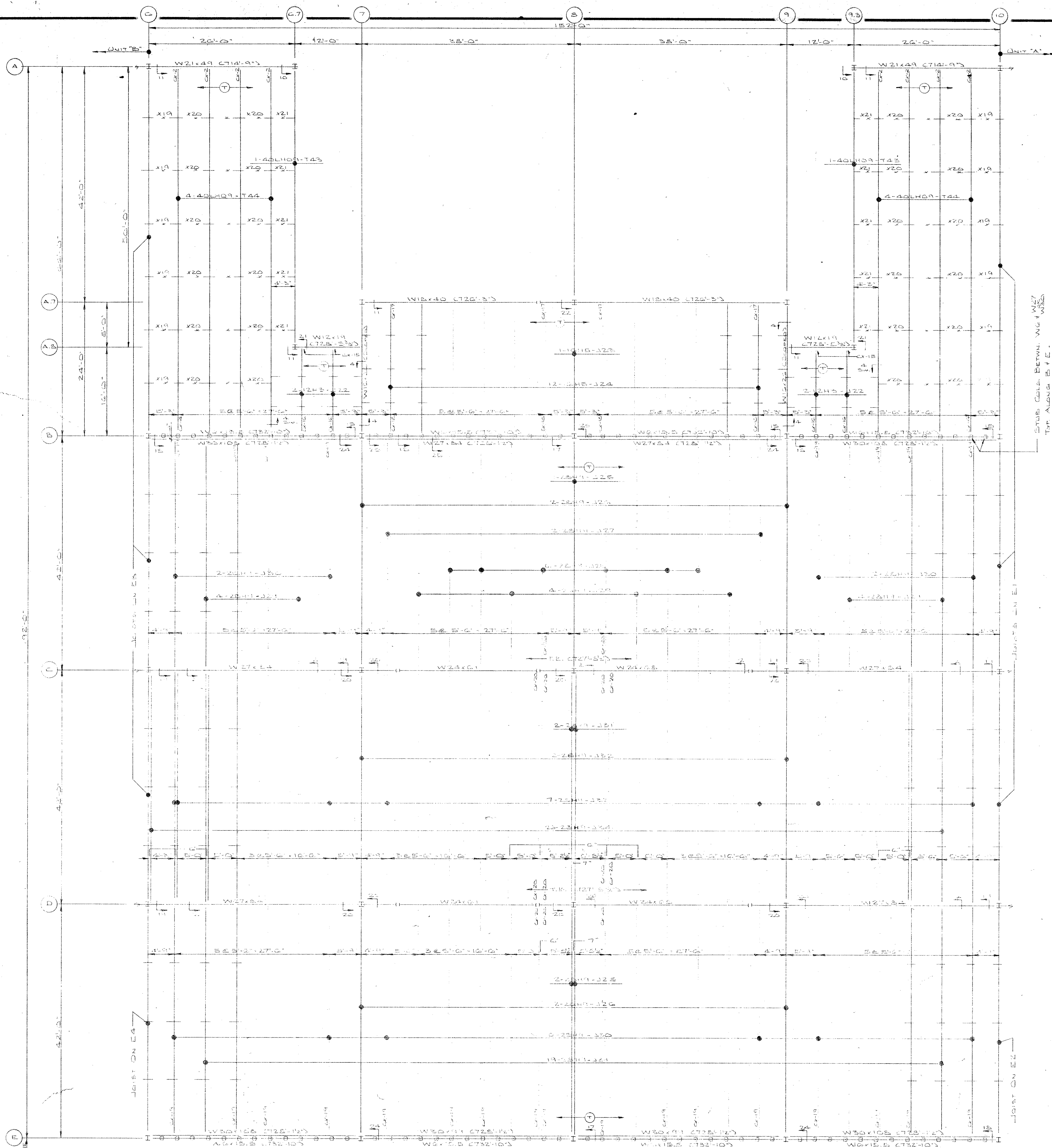












# IMPORTANT

## RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- Check quantities and condition of joists and accessories on arrival. **NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES.** We will not be liable for shortages not so noted.
- When unloading by crane always hook chains or slings to **TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS.** Use blocking if needed to prevent damage to joist.
- Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
- Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
- HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
- Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
- Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
- DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
- When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
- Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
- Vulcraft Division must be notified at once if joists and accessories cannot be erected according to label plans.
- VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
- DO NOT CUT AWAY ANY CHORDS OR WEBS.
- DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support.
- Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made.
- Do not dump or throw joists off of truck, as damage will result.
- Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

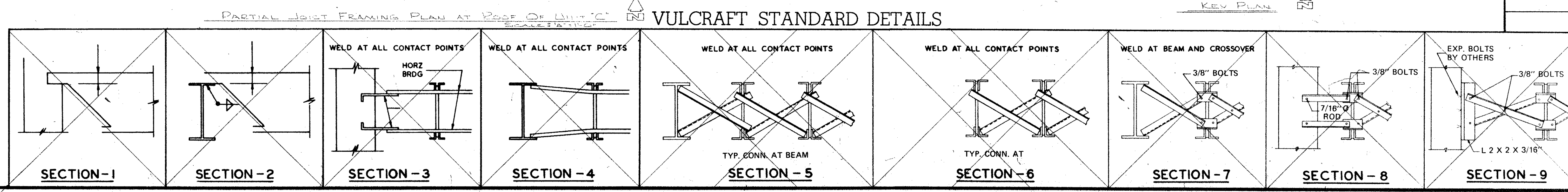
## NOTES

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- ALL SHORT SPAN AND LONG SPAN JOISTS ARE CAMBERED IN ACCORDANCE WITH S.J.I. STANDARDS UNLESS OTHERWISE NOTED.
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- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT
- PAINT—ONE SHOP COAT
- BRIDGING—4x4x1/2 How apply
- BRIDGING—4x4x1/2 Proctor Diagram
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS T
- N.L.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLANS FOR FIELD USE  
MAY 24 1976

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DATE	PRINTS	FOR
11/1/75	1	FOR LIGHTEN HALL, JOHNSON PLAN WORK CO.
11/1/75	1	AT MARTON GREEVE, ILLINOIS
11/1/75	1	SHIP TO JOE SITE
11/1/75	1	APPROVED AT JOHNSON, ILLINOIS
11/1/75	1	JOE MIDDLE SCHOOL
11/1/75	1	ARCHITECT
11/1/75	1	REPRESENTATIVE VULCRAFT STRUCTURAL STEEL CO.



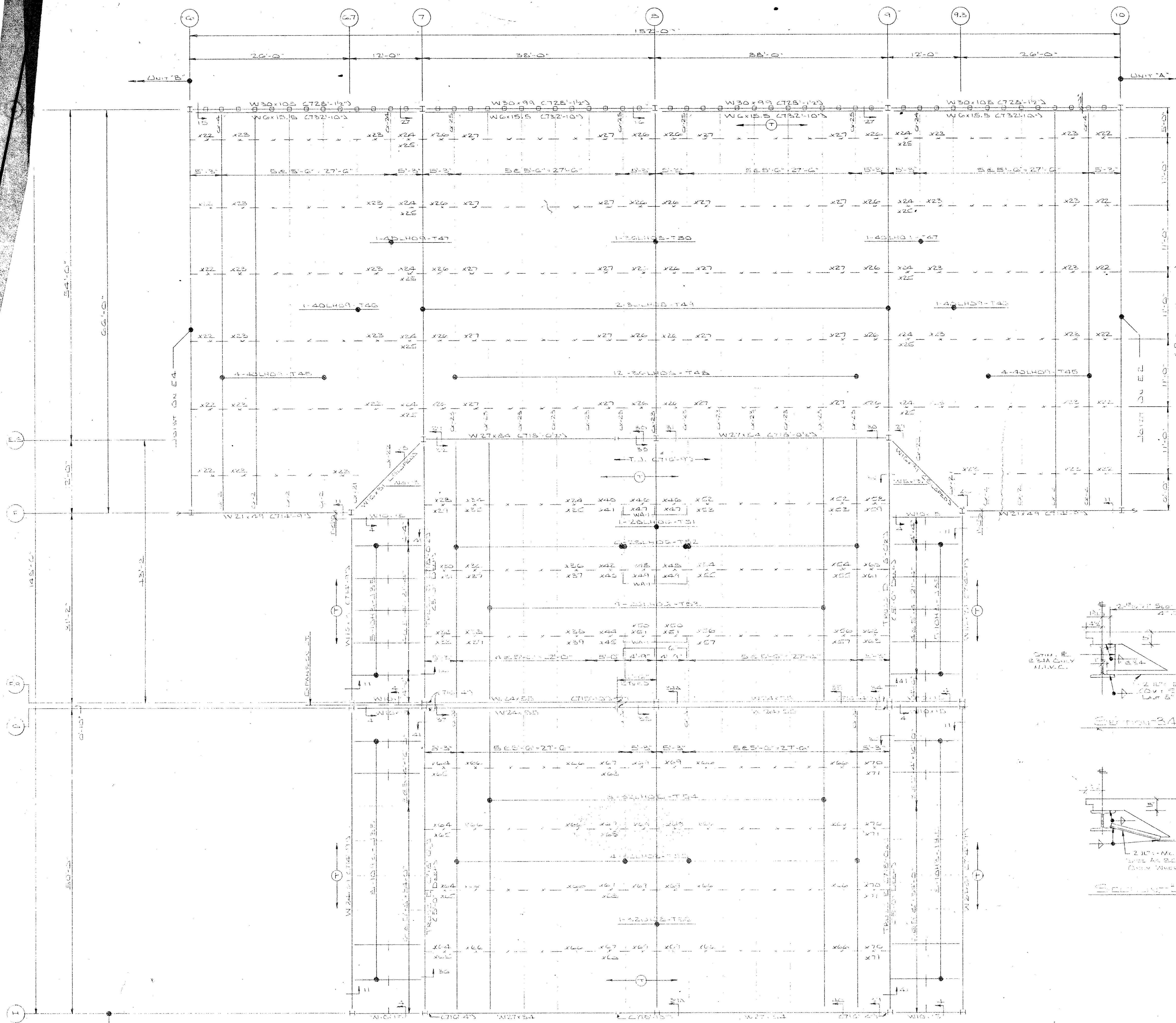
VULCRAFT  
A DIVISION OF HUCOR CORPORATION  
P. O. BOX 1800 ST. JOE, INDIANA 46785

DRAWN BY XXX DATE 11/1/75 CHECKED BY XXX DATE 11/1/75

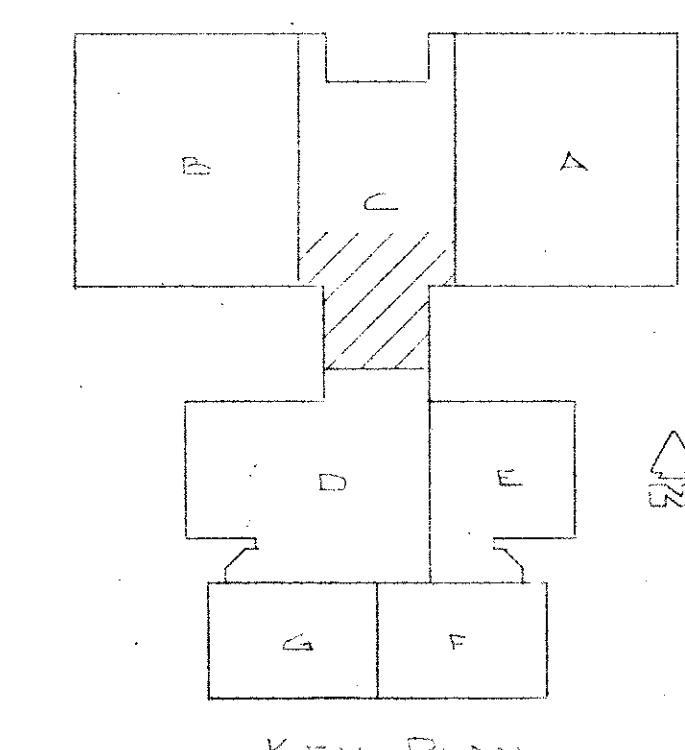
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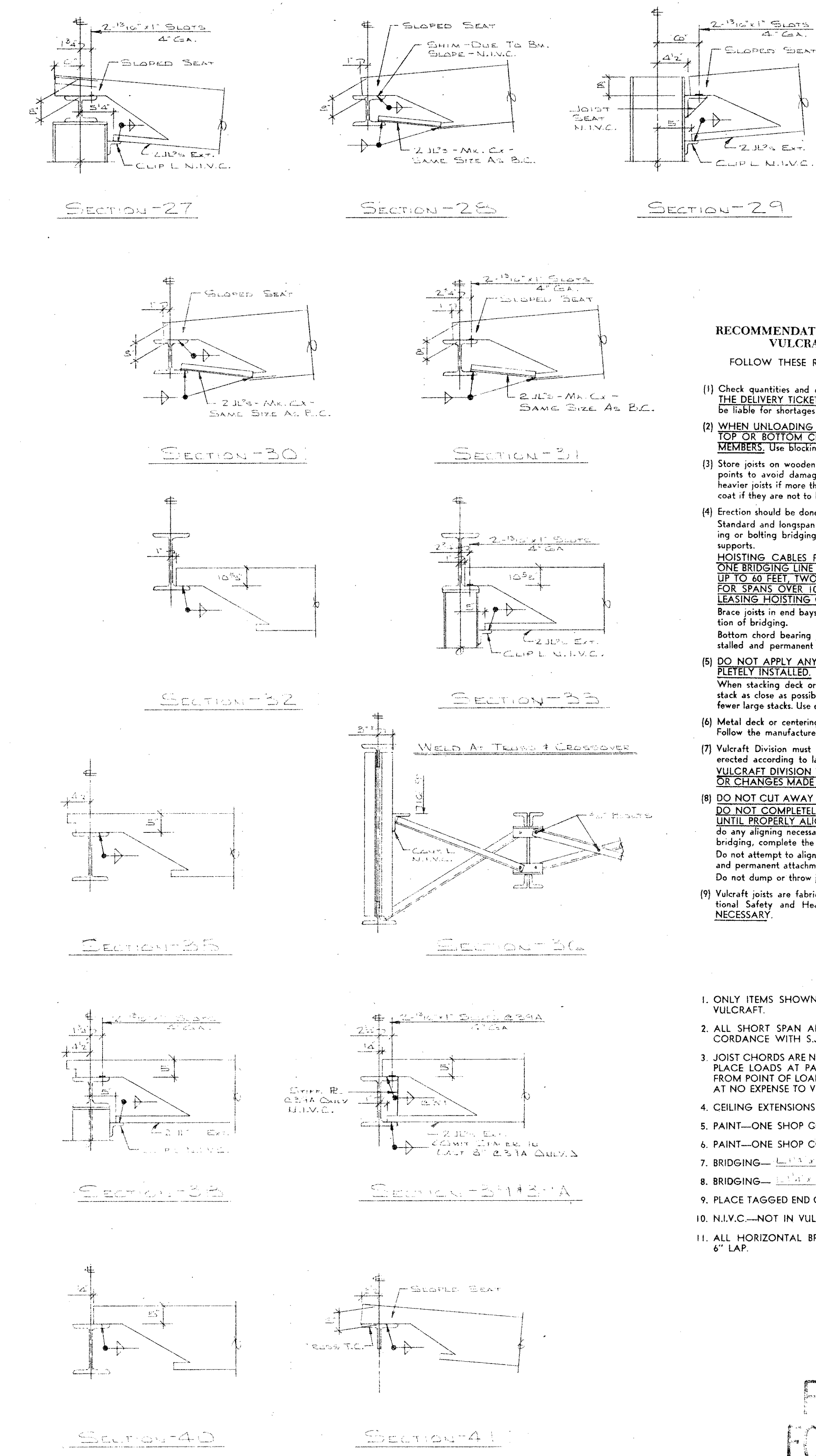




PARTIAL JOIST FRAMING PLAN AT RIGHT OF UNIT 'C'



KEY PLAN



### IMPORTANT

#### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

- FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION
- Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
  - WHEN UNLOADING BY CRANE ALWAYS HOOK CHAINS OR SLINGS TO TOP OR BOTTOM CHORDS, PREFERABLY AT 1/3 POINTS, NOT TO WEB MEMBERS. Use blocking if needed to prevent damage to joists.
  - Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
  - Erection should be done only with plans noted "FINAL PLANS FOR FIELD USE." Standard and longspan joists should be aligned properly before completely welding or bolting bridging and completing the attachment of end bearing seats to supports.
  - HOISTING CABLES FOR LONGSPANS SHALL NOT BE RELEASED UNTIL ONE BRIDGING LINE NEAREST MIDSPAN HAS BEEN INSTALLED ON SPANS UP TO 60 FEET. TWO LINES ON SPANS BETWEEN 60 FEET AND 100 FEET. FOR SPANS OVER 100 FEET ALL LINES MUST BE INSTALLED BEFORE RELEASING HOISTING CABLES.
  - Brace joists in end bays if needed to prevent lateral displacement during installation of bridging.
  - Bottom chord bearing joists shall also be braced at ends until all bridging is installed and permanent lateral stability is provided.
  - DO NOT APPLY ANY LOADS TO JOISTS UNTIL ALL BRIDGING IS COMPLETELY INSTALLED.
  - When stacking deck or centering on joists, after the installation of all bridging, stack as close as possible to walls or beams using several smaller stacks in lieu of fewer large stacks. Use extreme care to avoid overloading the joists.
  - Metal deck or centering must provide the required lateral support for the joists. Follow the manufacturer's recommendations for installation of deck or centering.
  - Vulcraft Division must be notified at once if joists and accessories cannot be erected according to latest plans.
  - VULCRAFT DIVISION WILL NOT BE RESPONSIBLE FOR ANY FIELD REPAIRS OR CHANGES MADE WITHOUT OUR WRITTEN CONSENT.
  - DO NOT CUT AWAY ANY CHORDS OR WEBS.
  - DO NOT COMPLETELY WELD STANDARD JOISTS TO BEARING SUPPORTS UNTIL PROPERLY ALIGNED. Tack weld each end of joist on the same side and do any aligning necessary during the installation of bridging. After installation of bridging, complete the attachment to the joist bearing support. Do not attempt to align or straighten joists in groups after installation of bridging and permanent attachment to bearing supports has been made. Do not dump or throw joists off of truck as damage will result.
  - Vulcraft joists are fabricated to meet the erection requirements of the Occupational Safety and Health Act. FIELD COMPLIANCE WITH THIS ACT IS NECESSARY.

### NOTES

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- CEILING EXTENSIONS ARE NOT FURNISHED.
- PAINT—ONE SHOP COAT
- PAINT—ONE SHOP COAT
- BRIDGING—
- BRIDGING—
- PLACE TAGGED END OF JOIST WHERE INDICATED THUS
- N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
- ALL HORIZONTAL BRIDGING SHIPPED IN 20' 0" LENGTHS STANDARD 6" LAP.

### FINAL PLANS FOR FIELD USE

MAY 24 1976

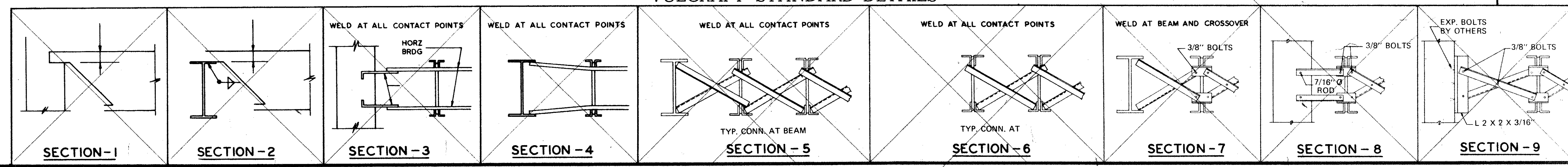
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DATE	PRINTS	FOR LIGHTS/VALD-JOHNSTON 1950 WORK
1	1	AT MONTANA BRIDGE PLANTS
2	2	SHIP TO JOIST SITE
3	3	AT AUSTIN BRIDGE PLANTS
4	4	JOB MADE 1950
5	5	ARCHITECT
6	6	REPRESENTATIVE

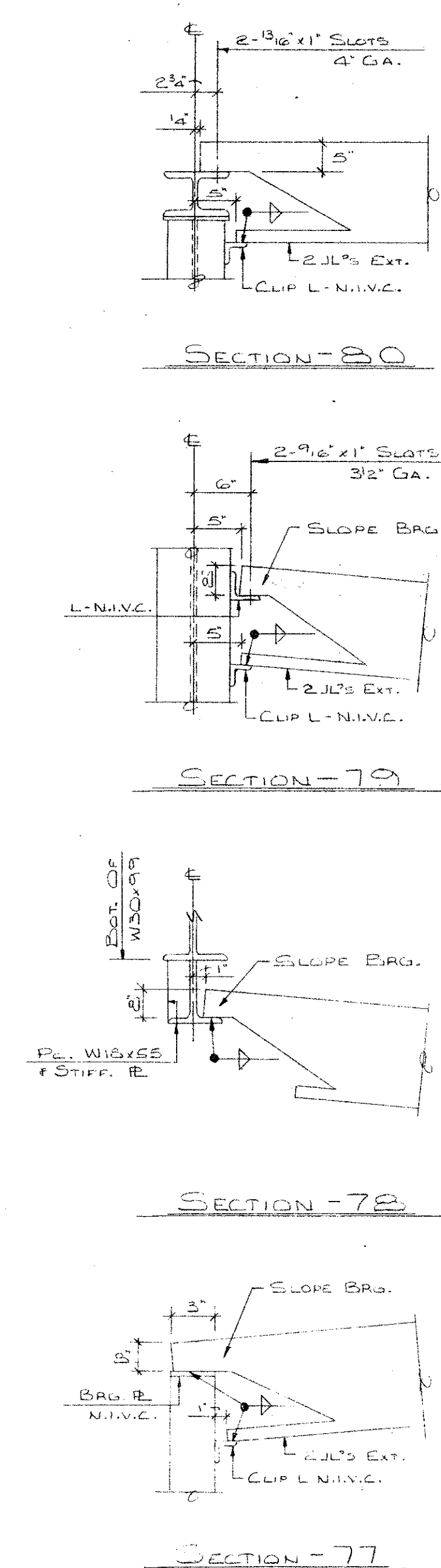
  

VULCRAFT	
A DIVISION OF NUCOR CORPORATION	
P.O. BOX 1000	ST. JOE, INDIANA 46785
DRAWN BY	DATE
NO.	REVISIONS
FILE NO.	DRAWING NO.

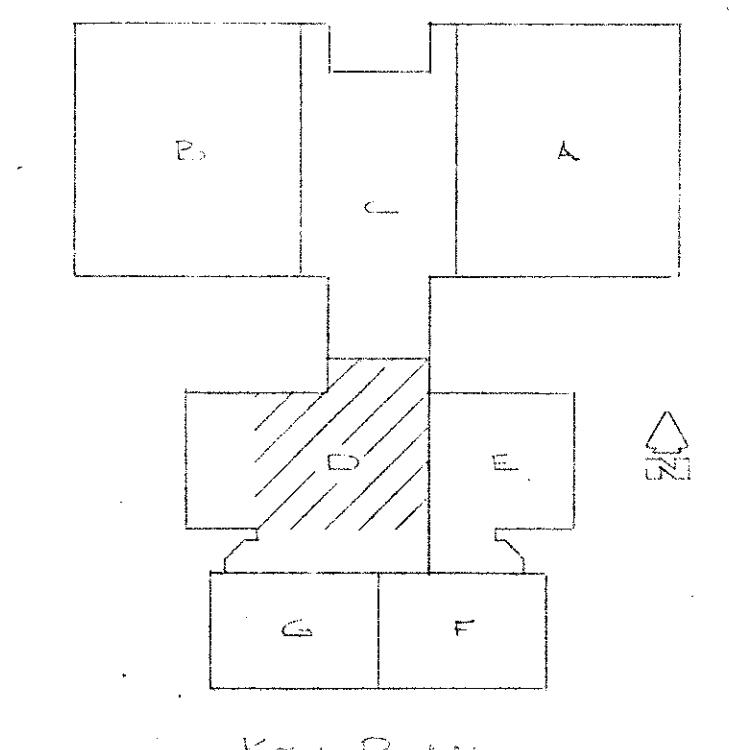
### VULCRAFT STANDARD DETAILS







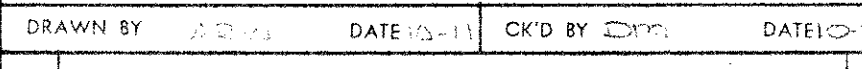
6" LAP.



MAY 24 1976

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WAY WITHOUT THE PERMISSION OF VULCRAFT

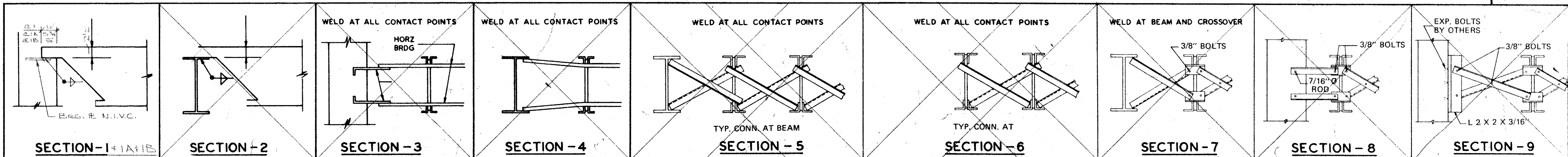
DATE	PRINTS	FOR
	CL	AT MILLER & JOHNSON IRON WORKS
III	AF	AT MILLER & JOHNSON IRON WORKS
	AF	SHIP TO NEW YORK
	AF	AT MILLER & JOHNSON IRON WORKS
	FIN	JOB MILLER SCHOOL
		ARCHITECT
		REPRESENTATIVE MILLER & JOHNSON IRON WORKS



No.	REVISIONS


[illegible]

FILE NO. 44-38861-1000 DRAWING NO. 1000 OF 1000



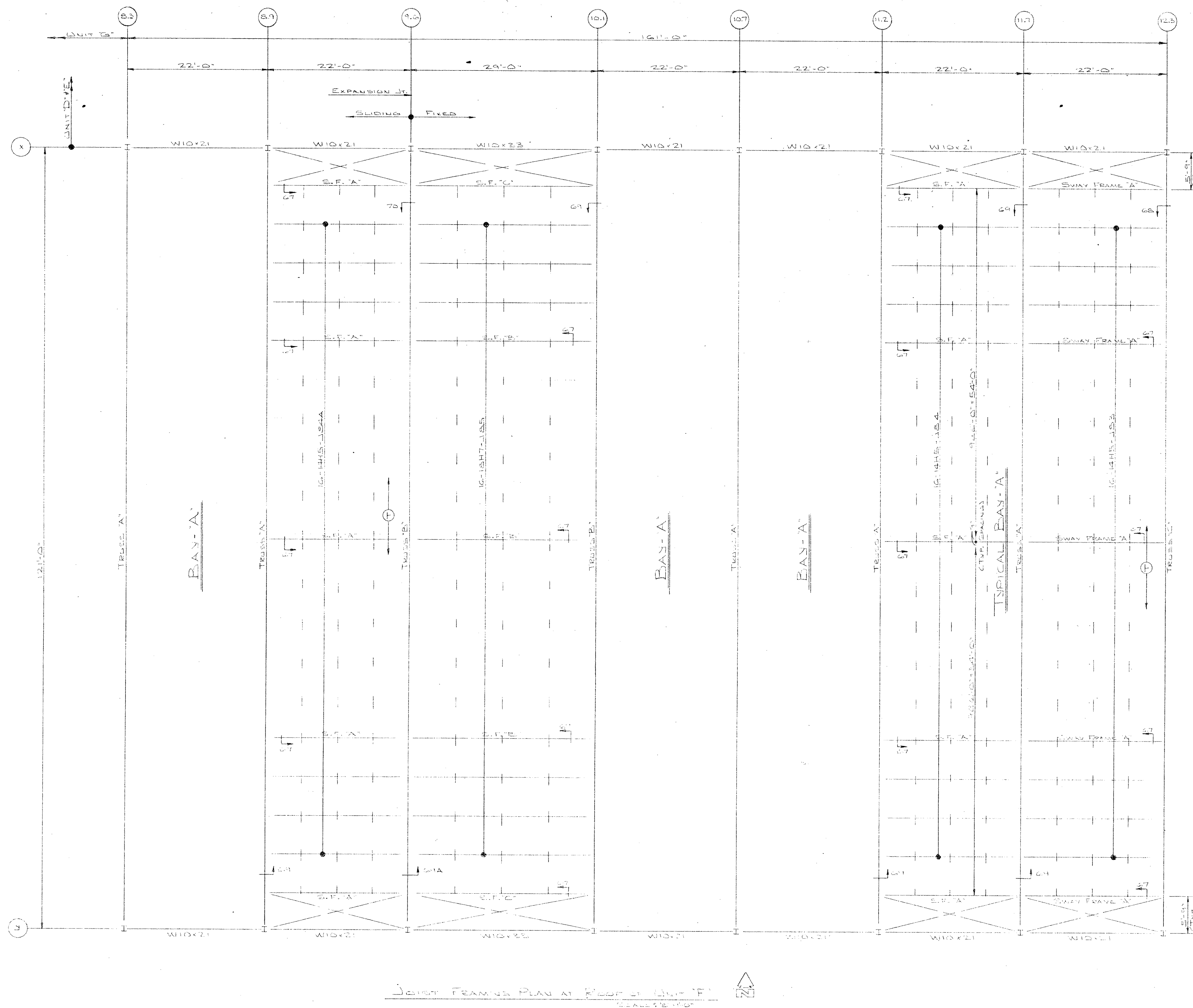




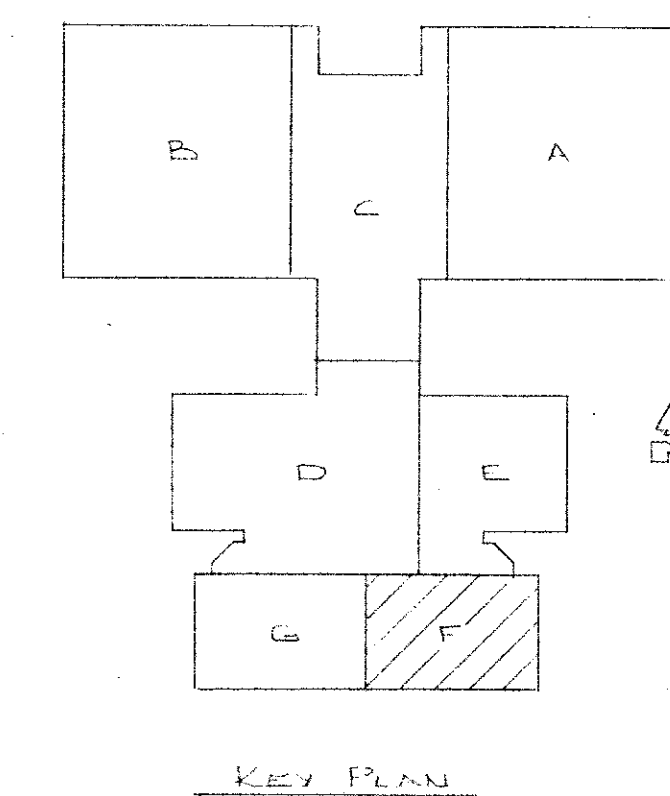
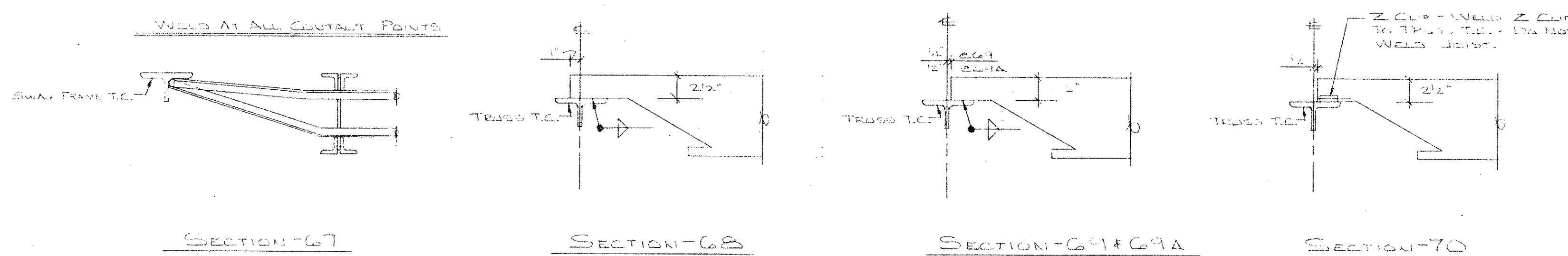




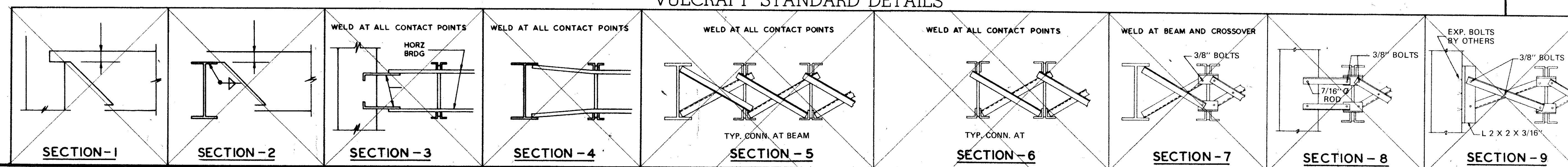




JOIST FRAMING PLAN AT FLOOR LEVEL



# VULCRAFT STANDARD DETAILS



## IMPORTANT

### RECOMMENDATIONS FOR HANDLING AND ERECTING VULCRAFT OPEN WEB STEEL JOISTS

FOLLOW THESE RECOMMENDATIONS FOR BETTER AND SAFER CONSTRUCTION

- (1) Check quantities and condition of joists and accessories on arrival. NOTE ON THE DELIVERY TICKETS ANY SHORTAGES OR DISCREPANCIES. We will not be liable for shortages not so noted.
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- (3) Store joists on wooden skids and in a vertical position. Skids should be at panel points to avoid damage to chords or webs. Lighter joists should be stacked on heavier joists if more than one layer is required. Cover joists to protect the prime coat if they are not to be erected immediately.
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## NOTES

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3. JOIST CHORDS ARE NOT DESIGNED FOR CONCENTRATED LOADS. EITHER PLACE LOADS AT PANEL POINTS OR FIELD WELD AN EXTRA MEMBER FROM POINT OF LOAD TO NEAREST PANEL POINT ON OPPOSITE CHORD AT NO EXPENSE TO VULCRAFT.
4. CEILING EXTENSIONS ARE NOT FURNISHED.
5. PAINT—ONE SHOP COAT. GRAY.
6. PAINT—ONE SHOP COAT.
7. BRIDGING—SJI TYPE 101. HORIZONTAL.
8. BRIDGING—
9. PLACE TAGGED END OF JOIST WHERE INDICATED THUS .
10. N.I.V.C.—NOT IN VULCRAFT'S CONTRACT.
11. ALL HORIZONTAL BRIDGING SHIPPED IN 20'-0" LENGTHS STANDARD 6" LAP.

FINAL PLANS FOR FIELD USE

MAY 24 1976

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